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THE SOUTHERN APPALACHIANS

A Resource Reservoir

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Editorial Notes

The Southern Appalachians, in general, include the Blue Ridge Mountains or eastern division, the Appalachian Valleys and Ridges to the west or the central division, and the Appalachian Plateaus called the western division. Along the southeastern border and along most of the northwestern border are well-defined escarpments separating the plateaus from the adjacent country. Occasionally in these articles somewhat different boundaries are used.

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Human Resources OF THE *SOUTHERN APPALACHIANS*

ARL C. TAYLOR. *Within this region wide contrasts are nd among the people but as the Highlanders are the most distinctive and the most cohesive, interest naturally centers on them.*

HUMAN RESOURCES are more than manpower, more than mere people, and more than aggregates of population, though they are all of these separately and combined. They are always raw resources but also always finished products. Because they can't be measured they are most often either known by population counts, which reduces them to mechanical numbers, or are advertised as Nordics, Master Races, One-Hundred-Percent Americans, or some other superior breed—which is just so much bunk. These statements are made not as wisecracks but to show how difficult it is to discuss things so qualitative as human resources.

Human resources are sometimes assumed to be measured by levels of living: by the houses in which people live, the food they eat, the clothes they wear, and the formal education they have. These are results, not causes; they are products of social organization, not raw resources as such. Furthermore, persons who discuss these end products generally emphasize deficiencies or liabilities, not resources or assets. There has been an epidemic of such discussion during the last 15 years about the people who live in the Appalachian Highlands. My purpose is to look at the other side of the shield.

No one is wise enough to separate human resources from the basic physical resources and their economic organization in any region or area of the United States. But one doesn't need to know much about the Appalachian region to be convinced that the amount and character of the population are not to be explained solely by the amount and organization of the physical and economic resources of the region.

The amount and character of population are at least as independent of physical resources as they are dependent on them. For once we shall discuss the human resources of the Appalachians without discussing the soils and the sizes of farms in the area, or the low incomes, and low levels of living of the people who live in the mountainous parts.

Reservoir

The Appalachian area is a reservoir of population. A reservoir is a place where supplies are stored and furnished at the right time to places where they are needed. There are places in the United States that consistently need population supplies. The great cities of the Nation, for instance, must draw constantly on population surplus areas or must decrease in size, and be short on labor, and in other human aspects. What would happen if the Nation had no population reservoirs?

Ever-Flowing

More than 17 million persons live in the six States of the Southern Appalachian region (Virginia, West Virginia, Kentucky, Tennessee, North Carolina, and Georgia); more than 5 million live in the 205 highland counties of these States. In 1930, 25.3 percent of all persons born in these States were living elsewhere and the net population contribution to the remainder of the Nation was 2,500,000 persons. This Appalachian reservoir can be trusted, for it constantly renews its own source of population supply, and pours it into the Nation's population-deficit areas. This region has more people than it needs at any time, yet during the depression it furnished a haven for thousands who had gone out of the mountains to help do the work of the Nation but came back home when jobs elsewhere caved in. When the depression was over and the National Defense and War programs came on, it again sent them where workmen were needed. Between 1930 and 1940 the rural-farm population of five of these States (Georgia not included) contributed 780,000 persons to other States through migration. At the same time enough babies were born in the Appalachian States to give the area 273,000 more persons in its population reservoir than were lost by migration.

If there were to be no migration out of these States during the present decade, 700,000 young men would reach the age of 20 years to take the places of the 280,000 males of working age who will die or reach the age of 65 by or before 1950. In other words the Appalachian States can fill all possible male vacancies in the area and have left 420,000 workers to go elsewhere.

To Arms

Probably no other area has furnished as large a percentage of its human resources to defense and war enterprises as has the rural-farm population of these six States. It is estimated that to the end of the year 1943, a million actual or potential farm workers 14 years of age or over had left farms in this area. Through enlistment or induction into the armed forces, through migration, and through shifts into nonfarm work in the region they have furnished the human resources to carry on defense and war activities.

The Highlanders

No one can measure a person. Therefore no one can appraise the Appalachian people as resources in other terms than numbers. But it is possible to describe them; to tell who and what kind of persons they are. Those in the highland areas are different from those in the other areas of the six States. They are the purest American stock in the United States. In 1930 and in 1940, only 1 percent of the white population in the area was foreign born. Their forebears first came in about 150 years ago and most persons in these Highlands can trace their lineage back to the days of Daniel Boone. They are called our contemporary ancestors, because they have retained so many characteristics of their pioneer forefathers. They are the sort of people we brag about as "Americans."

Early settlers came into the Appalachians from Pennsylvania and from the lowlands of Virginia and North Carolina. Some are of Pennsylvania German and Dutch origins but most are of English, Irish, and Scotch stock. Because those in the Highlands have been isolated and self-sufficient and are more like their grandparents than the rest of us, they have been called "hillbillies." But they are self-sufficient not shy people; independent not introvert persons. When they go out of the mountains they light on their feet, generate their own steam, and are considerably guided by their own headlights, whether they enter industry, business, politics, or institutions of higher learning. Their personality and character resources can't be measured, but every one who knows them knows that these qualitative descriptions of them are true.

About all that most persons know about Appalachian culture is that "hillbilly music" and square dances come from that area. A few know about their handicrafts and ballads. These, however, are only clues to the culture of the Highlands. Culture consists of a cluster of ways of doing and thinking which hang together as a whole technique of life. Songs, dances, and handicrafts are no more than symbols of Appalachian culture. The fabric of the culture is found in the manner, means, and methods by which the people make their living, the day-by-day ways they live, and the way they think and feel about these and other things. Many phases called culture aren't culture at all, technically speaking, and many so-called cultured persons have so few stable relationships and values that they are almost outside of any and all culture groups.

Distinctive

This Highland section comes as near to having a culture of its own as any section in the United States. Its culture is old, in terms of our history, and is stable. That is why it is unique and why it seems odd to many people. But who is to say that it may not be as great a loss to lose the culture which was built by our pioneers as it is to lose our original topsoils?

Family cohesion, family pride and loyalty, and large families are a part of the native Appalachian culture. That is why the area is a national population reservoir. Individual and family self-sufficiency is another part. That is one reason why low material levels of living persist there. The farm families produce a larger percentage of their own food than is true in any other area. Many still spin and weave their own cloth; many build their own houses, make their own furniture, their own farm implements and tools. They still gather or manufacture their own medicines and do a lot of their own doctoring and practically all their nursing. They create, keep alive, and enjoy their own folk games, dances, and songs, and make many of their own musical instruments. A recognizable part of their handicraft is real art and they still create ballads.

Rich Contributions

Most persons know more about a few famous mountain feuds than they do about local neighborhood and community cohesions. A very few of the hillbilly songs tell about these feuds, but intimate and right family, neighborhood, and community solidarity has created a great body of folk art which is a rich contribution. These social gifts must arise out of a type of life that begets creativeness, else why the creations? And what other area has created more?

National Assets

Stability can be stultifying and personal self-sufficiency can cut off the influence of outside stimuli, but both can be and most often are citizenship assets. They are listed here as human resources because they are the materials out of which so many other things can be and are made. They exist in the Appalachians in abundance, are being sustained and created there by the daily ways of life.

Resources are assets, not liabilities. Therefore this article has dealt with the human assets not the deficits and deficiencies of the Appalachians. Some of these assets are the capacity and tendency to generate population and manpower, to develop independent and self-sufficient personalities, to preserve culture, and to create cultural arts. If these are not assets, what are they?

Human Values

It is possible that a greater importance should be attached to the human values represented in the country arts than in many things impressively demonstrated in statistical tables. Obviously, human values are the ultimate criteria by which a campaign against Japanese beetles or an inquiry into corn and cotton prices must ultimately be judged.

—M. L. Wilson

FARMING and *Farming Prospects*

By R. J. SAVILLE. *Farming shows sharp contrasts in this region therefore more than usual discrimination is needed when making adjustments and the farming should be integrated with the other activities.*

FARMING in the Southern Appalachians is experiencing definitely favorable adjustments in response to heavy wartime demands for farm products. There are many severe obstacles to overcome. But farmers have found that they can meet an urgent need by making the best use of their resources.

It is hardly possible to describe Appalachian agriculture and its prospects as a single pattern, for the region comprises widely different land and farming conditions in its 205 counties. The larger segment includes the mountains and plateaus, while a smaller but very vital part is the interspersed valleys. Each has some problems not found in the other, but in the main the problems of the region affects agricultural developments in each area.

In the valleys most of the land is in farms, and of the land in farms a high percentage can be used for crops. The topography is level to rolling. The limestone formations have provided a highly fertile soil which responds well to agricultural use. These conditions have favored large-size fields which permit greater use of mechanical power and heavy farm machinery and the farms are large enough so that efficient use of labor is possible. The proportion of farms having high incomes, as well as the average level of incomes, indicates a well-advanced commercial agriculture.

It is mainly in the valleys that one finds the highly specialized farms—orchards, cattle ranches, dairy farms, and others. Transportation facilities are developed so that surplus products from these farms can easily reach the markets. Heavy total capital requirements per farm, more livestock of all kinds, and larger acreages of crops all indicate the present adjustment that exists between people and farming resources.

The mountain area presents a sharply different picture. The rough topography, shorter growing season, large reaches of timber-covered land, and frequent rock outcrops limit severely the farming possibilities. The natural fertility of the soils—which come mainly from sandstones, crystalline rock, and shales—is low and is quickly reduced under cultivation. Heavy rainfall and the rapid run-off cause serious erosion to cultivated land and tend to flood the level land along the narrow valleys.

Transportation facilities are hard to develop, and maintaining a permanent market for small surpluses of farm products is most difficult.

Under these physical barriers of the mountains, farming there has developed around a subsistence basis. Much of the crop production is on small fields, comprising little patches of land in the coves and narrow valleys, on the hillsides, and on the plateaus. Livestock usually includes what the feed supply can support, which frequently means hardly enough for good subsistence for a rural family. Farming under these conditions limits the use of farm machinery and power severely, which means unusually high requirements of man labor per unit of production. As only small surpluses of farm products are available for market, cash incomes from farming are very small. Consequently, there is constant pressure for income-producing work.

Contrasts

Under these quite different characteristics of the mountain and the valley agriculture, responses to need have varied widely. As the main population increase has been in the mountain area, that is where the greatest pressure on land for subsistence farming has developed, and the agriculture has been adjusted to meet such a change. The valleys were already occupied and the land held in farming units, so that the immediate effect of population growth on agriculture has been much less there. To meet the need in the mountains, the acreage per person has been reduced still further and more land has been cleared.

There has been a constantly changing situation in land use for farming in the Appalachians. The total acreage of land in farms has been downward since 1900, and the cropland has declined at a more rapid rate. Some land formerly in farms has been disposed of to nonfarm owners. Cropland has been shifted to pastures or allowed to reforest. As some fields were abandoned because of erosion and loss of fertility, new fields were opened for cropping. But this is partly because other work in the region is so uncertain.

Tie-Up

Agricultural land use is vitally tied up with other land uses, and with industrial employment. Nearly two-thirds of the mountain area is not in farms, and, including land in farms, about three-fourths is used for other purposes than crops and pastures. The mountain lands are more suitable for uses which require less labor and return a lower average annual income per acre than does practicable farming. These uses, such as forestry, recreation, grazing, rural homes for the industrially employed, should be fully developed as income-producing resources that will provide work and income for the people of the area. Farming should be kept at a minimum and continually adjusted to the most suitable land. But on farms, the land not in crops and pasture should be developed into its appropriate land use, for the profitable utilization of all resources.

The nonfarm occupations provide work for large numbers of people in the region, including many part-time farmers. More than 30 percent of the farmers outside of the valleys are reported as having annually worked off the farm 100 days each, or more. When industrial activity is high, wages from other work ease the pressure on the limited farm resources. Only if such employment can be maintained at a relatively constant pace will there be a real chance for those who are entirely dependent on farming to make suitable adjustments to improve their own incomes. But when mines shut down, sawmills stop, and industrial activity drops to a low level, unemployment prevails and the people turn to the land for subsistence.

Outlook

Out of this background, what are the prospects for agriculture in the Southern Appalachians in the period ahead? The impacts of war have made some sharp changes in trends and give occasion for suggesting a desirable pattern of readjustment. The heavy demands for manpower, for raw materials of mines and of forests, and for foods, have provided chances for adjustment. Large out-migration for industrial work and full employment in mining, forestry, and other occupations within the region have reduced the pressure on farming. But there is still a surplus of workers in the Appalachians to handle farming at its maximum capacity, except for some specialized systems of farming.

For permanent improvement in agriculture, favorable conditions for change must continue long enough so that the needed adjustments may be worked out. Most important of all is to keep the way open for continued migration of excess manpower from the region, and for continued industrial development within the region. Some of those leaving might find permanent livelihood in agriculture elsewhere. For those who remain in farming, improved farm incomes must come from adjustments in sizes and types of farms and much wider adoption of effective management practices to increase rates of production.

Reason

> *Reason has never failed men. Only force and repression have made the wrecks in the world.*
>
> —William Allen White

The best suggestions on possibilities for agriculture in the Appalachians may be drawn from recent studies of war-time production capacity and from plans for the long-run period to follow. Agricultural workers have suggested desirable adjustments which will help the region to realize its maximum contribution to agricultural production. Insofar as these can be achieved some measure of improvement can be claimed.

Farming should be shifted to the better land for agricultural use, with fewer farms and larger average-sized farming units. Emphasis should be given to systems of farming that increase livestock enterprises, particularly dairying and poultry, and to providing more pasture and feed supplies to maintain such livestock. Greater effort should be directed at increasing the use of fertilizers and lime, and in the adoption of other management practices that will improve crop yields and rates of livestock production. Larger acreages of intensive crops, such as commercial fruits and vegetables, cotton and tobacco, might well be included where markets are available. Most of the Appalachians are already near maximum production capacity so far as acreage for cropland and pasture is concerned. Expanded production must be through greatly improved yields from the land.

Stop Light

These suggested adjustments should reduce sharply the number of subsistence farms. No more total land area should be brought into farms, though some further shifting of land in farms is desirable to take in all land most suitable for farming, and to take out of farming that which is least suited for farm use. Cropland should be stabilized at slightly lower levels, with the idle land that has been in crops restored to crop use or permanently shifted to pastures and forests. Finally, increased acreages of feed crops, mainly small grains and hay, will help to supply the feed for the livestock enterprises.

Go Signals

Changes such as these are quite possible. Better care of land will reduce erosion, provide drainage, and protect level lands from serious overflow. Widespread adoption of recommended practices in the application of phosphates and lime, together with rotations containing less row crops, will provide increased crop and pasture yields. These agronomic practices will provide more abundant feed supplies for livestock, and the nutritional value of the feeds will be reflected in better livestock production. Greater use of special farm equipment suitable to farms in the area will improve the efficiency of labor and encourage needed shifts in cropping. More dairy cows and poultry will make the best use of the feeds that should be expanded, and will supply urgently needed livestock products of high value. Some further increase in intensive crops will mean much-needed income and will give additional employment, without reducing seriously the production of the crops so displaced. The Tennessee Valley Authority and agencies working with it have gone far in developing suitable practices for farmers to help them make the changes that are needed.

Integration

But we must not overlook the caution that these opportunities suggest. There is always the danger that industry will not make full use of its developing possibilities and keep attractive employment open long enough for farmers to be drawn off the land that is least suited to farming. Nor would it permit adjustment of other farms to larger-sized units and more suitable soils, or to shift the systems of farming, so that increased labor efficiency and financial returns from farming may be realized.

The agricultural economy must be closely fitted to the industry and commerce of the region. There is need for serious study of the possibilities of integrating the new industrial development with agricultural production and, with the utilization of power and other resources, in such a way that farm and industrial production will supplement each other in providing the products needed in a higher level of living for the people of the region.

Thriving Industries FROM *Mineral Wealth*

By ALLAN F. MATTHEWS. *Resources of the Southern Appalachians include a wide variety of minerals. The juxtaposition of some of these particularly enhances their usefulness—now and for the future.*

GEOLOGIC upheavals that raised the Blue Ridge Mountains and sedimentary activities that paved its flanking valleys have stored a wealth of minerals in the Southern Appalachian province. Comprising less than 4 percent of the surface of the United States, this region digs 12 percent of the country's mineral output—a tonnage worth 800 million dollars annually. Its mining industry, moreover, is so interrelated and well balanced as to constitute a classic.

Modern industry is founded upon the power and chemistry of coal, which is abundant in Southern Appalachia. West Virginia and Kentucky rank second and fourth, respectively, among coal-producing States, and together with neighbors in the same region they mine 41 percent of the Nation's solid fuel. There is, fortunately, still plenty of unmined coal in the Southern Applachians—380 billion tons, enough to last 1,500 years at current extraction rates. The coal is easy to mine because the seams are nearly horizontal and often outcrop on hillsides, allowing the mineral to be conveyed by gravity to barges on the rivers below.

Petroleum, the other great mineral fuel, also exists in the region, but in relatively smaller quantities. Although a leading producer at the turn of the century, the Southern Appalachians were subsequently outclassed by flush wells farther west, and the 8 million barrels now pumped annually is less than 1 percent of the country's output. This is enough, however, to supply about one-fifth of the gasoline requirements of the region and three-fifths of its fuel oil. Proved petroleum reserves in West Virginia and Kentucky total 82 million barrels—a 10-year supply at present pumping rates—but new discoveries and improved methods of extraction will surely enable a much greater yield.

Natural gas, a geologic companion of petroleum, exists in large quantities in the region. George Washington in 1775 noted in his diary the "burning springs" on the Kanawha River. Utilization of natural gas dates from its discovery in a saltwater well at Charleston, W. Va., in

1815. The annual marketed output of Southern Appalachia is 10 percent of the United States supply. Reserves are believed to be very large. About half of the production is consumed locally and the remainder piped elsewhere. Less than a fourth of the natural gas is burned to heat buildings; the bulk of it is used to pump and refine petroleum, to drive power plants, and to furnish clean and controlled heat for the manufacture of metallurgical products, portland cement, ceramics, and chemicals. Natural gas appears to be an ideal agent for the progressing business of dehydrating fruits and vegetables.

The principal importance of fuel resources is their collaboration with metals in supporting basic industries, particularly the making of iron and steel and the utilization of their products. Rarely do coking coal, iron ore, and fluxing limestone—the basic ingredients of ironmaking—occur together in a single locality, but this happy association is found at Birmingham, Ala., in a basin about 75 miles long and 40 miles wide. Localization of raw materials is enhanced by adequate labor, temperate climate, and nearby markets. These factors make Birmingham the second largest iron-mining district in the country, even though, in contrast to the Lake Superior district, its ore is low-grade (37 percent iron) and must be mined principally by underground methods. The Birmingham district produces 8 percent of the country's iron ore and 7 percent of its pig iron. Iron ore is also extracted elsewhere in Alabama and in Georgia and Tennessee. Southern Appalachian mines yield 12 percent of the national output, and known reserves are expected to last 150 years at current consumption rates.

The metallurgical process of converting pig iron to useful steels requires large quantities of ferro-alloys. Most of the ores from which these alloys are derived are imported, yet some occur in the Southern Appalachian province. Metallurgical-grade manganese ore is mined, and the region holds perhaps one-eighth of the Nation's reserves. A little chromite has been extracted. Steels for high-speed cutting tools generally contain tungsten, which was found only a few months ago in an extensive deposit in the mountains of North Carolina. Titanium, used to remove impurities from molten steel and to coat welding rods, is also mined in the region. Hydroelectric power, river transportation, labor supply, and salt and lime deposits were factors inducing the establishment of a ferro-alloy plant and a nickel refinery in West Virginia to treat ores imported from foreign countries; these plants rank

Meaning

The name, Appalachians, itself, excites curiosity. We are told that it means "those by the sea," and was the name of a southern Indian tribe.

—Drawn from
U. S. Geological Survey

West Virginia third in the country as a ferro-alloy producer.

Another Southern Appalachian industry based on outside ores is aluminum, so fundamental in the production of airplanes. Bauxite from Arkansas and the Guianas is converted to alumina, much of which is then reduced at Alcoa, Tenn. The plant there turned out 40 percent of the aluminum metal made in the United States in 1940, although its relative standing has been reduced somewhat in subsequent years by new projects in other regions of the country. Hydroelectric power seems to be the dominant factor in the location of aluminum refineries.

Smelter

Copper for electrical manufactures, ammunition, and power and communication lines has been mined at Ducktown, Tenn., since 1847. The ore, supplemented by small quantities from North Carolina, is treated in a local smelter, whose copper output is about 1 percent of the United States total. Ducktown is the second largest copper-mining district east of the Rocky Mountains, and its reserves are believed to be adequate for some years to come. The smelter also yields important chemicals, bullion, and iron sinter.

Zinc for galvanizing and brass-making is mined in Tennessee and Virginia—the country's fourth-ranking district and one that produces ores containing 60,000 tons of zinc annually or 8 percent of the United States output. A little lead is mined in the same district. In West Virginia are two smelters treating zinc ores from other regions. Several hundred ounces of gold and some 40,000 ounces of silver are recovered annually at Ducktown. Limited quantities of the precious metals are also mined spasmodically in other Appalachian localities.

In addition to the fuels, there are numerous nonmetallic minerals important to the economy of an area. One of the most significant is fertilizer, particularly in the Southeast, where large quantities of this commodity are required. Although the Appalachian Valleys are notably fertile, the borderlands are not. Nitrogen for fertilizers and explosives is produced at a large plant in Charleston, W. Va., by atmospheric fixation and at coke ovens in coal-producing States. A third of the phosphate rock supply of the United States comes from Tennessee, the second largest producer. Reserves are expected to last a century.

Paradox

Phosphate rock is converted to usable fertilizer by sulfuric acid, which has a multitude of uses and which is derived from elemental sulfur or pyrites. Ducktown, Tenn., and Cliffview, Va., are the first and third largest pyrites-mining districts, respectively, in the United States. When cupreous pyrites were first smelted for copper at Ducktown, the sulfurous fumes set free soon made a desert of the immediate countryside. This forced the operator to neutralize the fumes, resulting in one of the largest sulfuric acid plants in the world and netting the company more income than is derived from the copper! Most of this acid is used to treat Tennessee phosphate.

Suitable building materials are decided assets to any area. Sand and gravel are ample in the Southern

Appalachians. Limestone, which floors the valleys of the region, is important not only as a producer of fertile soil and a flux for iron ore but also as a construction material and basic chemical. Crushed limestone makes good country roads and is burned with shale to manufacture portland cement. Deposits of gypsum and slate are worked in Virginia.

Georgia and Tennessee quarry about 60 percent of the Nation's marble. Building and monumental Georgian marbles are highly crystalline and are colored white, gray, bluish, or pink. Gray and light pink marbles quarried in Tennessee are used principally in interiors for floors, steps, and wainscoting. Alabama is noted for a pure, low-porosity marble, some of statuary grade. Dimension limestone, sandstone, verde antique (serpentine "marble"), and greenstone are also quarried in the Southern Appalachians. The American soapstone industry is centered in Virginia, where the soft rock is cut for furnace blocks, wainscoting, laboratory sinks, and switchboards.

Combinations

The juxtaposition of lime, salt, coal, and water in the region has resulted in the establishment of alkali and chlorine plants in the Virginias and is the basis of a large and growing synthetics industry. Plastics, nylon, and plexiglas, for example, are made in Tennessee.

A strategic mineral that occurs in Southern Appalachia is mica, which is an essential insulator material in the manufacture of radio parts and electrical equipment. North Carolina alone supplies over half of the country's output, and additional quantities come from neighboring States.

Largest

Several branches of the ceramics industry are well developed in Southern Appalachia. Potteries were established in early days in West Virginia to take advantage of the clay deposits there, and in order to avoid dislocating skilled workers they remained even after the local raw material was considered too inferior to use. One is now the largest dinnerware plant in the world. Georgia and North Carolina are leading suppliers of china clay (kaolin), and ceramic fluxes such as feldspar, spodumene, and aplite are also found locally. West Virginia is the largest producer of glass sand (over 99.8 percent pure), but the fact that it has more than 40 glass plants is due partly to the availability of natural gas. A factory for making optical glass was built by the Government at Parkersburg, W. Va., in 1942.

Refractory materials such as fireclay, olivine, vermiculite, bauxite, and kyanite are prevalent. Reserves of the first three are very large, and olivine is being investigated as a possible source of magnesium metal. Abrasives in the region include quartz, garnet, corundum, tripoli, grindstones, and millstones.

The paint industry consumes limonite, talc, titanium, and barite mined in the Southern Appalachian region. As titanium white is now the largest-selling white pigment, the sizable titanium reserves in Virginia are important. The region produces half of the country's barite, used to make lithopone and glass and, in larger quantities, to give body to oil-well drilling muds. Bauxite is mined in Georgia for making aluminum chemicals, olivine in North Carolina for epsom salt, and apatite in Virginia for baking powder.

Emeralds have not been found anywhere in North America except at Stony Point, Alexander County, N. C. One was 3 by 1¾ inches and weighed 9 ounces. Choice specimens have yielded cut stones valued at $100 a carat. Aquamarine, golden beryl, and hiddenite have also been found at this locality.

Years to Come

Thus the Southern Appalachian province produces minerals worth more than three-quarters of a billion dollars yearly. The fortuitous grouping of these minerals is noteworthy. The association of coal, iron ore, and limestone enables a steel industry. Phosphate rock and sulfur together yield fertilizer. Building stone, cement, and sand supplement each other as construction materials. Lime, salt, coal, petroleum, and water add up to plastics. The combination of clay, feldspar, glass sands, and natural gas supports a large ceramics industry. Significant is the fact that the quantities of basic minerals present are sufficiently great to assure large-scale production for many years to come, and they are supplemented by a wide variety of lesser minerals that help diversify the economy of the region.

Stewardship

When people try to live by getting more out of the land and out of each other than they give back, the community sickens and may die. But it has been shown that when they take care of the land and each other, they are likely to find eventual security through this stewardship of their physical and human resources.

—Arthur Raper

Appalachian Forests—
FULL AND BETTER USE

By WILLIAM A. DUERR. *This once rich resource still contributes to welfare, but temperance and good management and more complete utilization would mean a far greater and more permanent contribution in the future.*

FEW AREAS of the United States have so much to gain from wiser management and fuller use of forests: few areas are so dependent for their livelihood on nonagricultural land resources. Forests have contributed substantially to the life of the Southern Appalachians. The region is a leading producer of hardwood timber of varied kinds; its wooded mountains and valleys are a recreation ground for many thousands of visitors each year; it is a great upland watershed, protected by trees—the roof of the eastern United States. But these forests are not contributing their full measure to the life of the people. How to get the most from forest land in the long run—to get the fullest contribution to employment and income—this is a major question.

Today may well be a turning point in the forest situation of the Southern Appalachians. The war has dipped deeply into the region's manpower, and those men and women who remain away after the war will lighten by just so much the burden to be carried by the land resources. On the other hand, those who return will bring with them altered standards, calling inevitably for a heavier use of resources. The war has dipped deeply, also, into the timber resource itself—so much so that the forest may be near low ebb at the close of the war. Then the problem of matching timber resources with the need for them will be pressing.

There have been other turning points. The period of settlement in the late eighteenth and early nineteenth centuries, when a start was made in clearing the unbroken forest, was perhaps the first. Another came when the people increased in numbers abundantly under isolation, when over large area an enduring pattern of hard-pressed, subsistence agriculture was established, with forest lands used and abandoned in rotation with corn and pasture. Another came with the big lumbering operations, the railroads, and the mines, near the turn of the present century. It was then that the hardwood industry moved southward from Pennsylvania and began to exploit the region's virgin yellowpoplar, chestnut, and oak—a process now virtually complete. For a time, forests contributed very heavily to income.

This current century has seen the rise of an industry of small sawmills, to pick over the leavings of the large operations. It has seen the arrival, and in some cases the later departure, of other wood-using plants attracted by the wide variety of the timber. Working its way down through the region, the blight has killed in 25 years practically all the chestnut, which was originally a fourth of the merchantable mountain timber. Beginnings of public forest ownership came with the establishment of eight national forests and two large national parks to protect watersheds, provide recreation, and save and rehabilitate lands unsuited to private ownership. The first World War and the coming of roads stimulated timber use and helped to dispel the frontier—the social frontier, but not the resource-management frontier.

Reviewing these events, one is struck by the fact that almost all of them represent phases of resource exploitation. Foresight, concern for public values—these have played but a minor part. Considering this, a surprisingly large reservoir of forest resources remains, a testimony to the great regenerative power of the region's forests in the absence of care.

Considering here a Southern Appalachian area of some 51½ million acres—198 counties, comprising all of West Virginia, eastern Kentucky and Tennessee, western Virginia and North Carolina, and northern Georgia—one finds more than 30 million acres of forested land. Forests occupy about 60 percent of all the land as compared with 15 percent for cropland and 22 percent for other cleared farm land.

An inventory of this Appalachian forest reveals that more than six-tenths of it is in farms and in other private holdings each smaller than 5,000 acres. Another two-tenths is held in larger blocks by lumber, land, and coal companies. The remainder, nearly two-tenths, is in public ownership, chiefly national forest. The farm woodland which has such an important place in the regional forest picture, unlike that in neighboring parts of the country, occurs mostly not in isolated blocks but rather as part of the general forest background behind and above fields and pastures. This woodland comprises 37 percent of all land in farms, and in 1939 the value of its timber products was 6 percent of the total value of farm products.

Altogether, there are some 37 billion board feet of standing sawlog timber in the Southern Appalachians. The quantity of all usable wood, cordwood as well as saw timber, is about 350 million cords. This means 1,220 board feet of sawlogs or 11½ cords of all-sized material on the average acre of forest—possibly about a fourth or a fifth of the original stocking of timber. Some of the forest has been so heavily cut over, or so often burned, or so recently regenerated that it consists of little more than brush or saplings. This is true, for example, of much forest land near the coal mines,

Ownership

If a man own land, the land owns him.

—Emerson

where the timber has been stripped for use in mining, and of farm lands recently abandoned to trees. Nearly six-tenths of all the forest supports so little large timber that it is economically unavailable for sawlog operations. Of the remainder, most has been cut over—some acreages repeatedly, some only once to take the largest and best trees—but the residual stand is still heavy enough to be operable. On the whole, then, there is a good deal of timber, but it is widely scattered and much of it is of small size or inferior quality.

The Appalachian forest bears a remarkable variety of trees — a greater variety than is to be found in any other region of the country. Hardwoods predominate, accounting for nearly nine-tenths of the total quantity of usable timber of all sizes. Of some hundred commercially important kinds of hardwood trees found in the United States, 55 grow in the Southern Appalachians. These many kinds of timber, with their many and useful characteristics, are a substantial regional asset.

Arresting Truths

The variety of the region's timber is matched by the variety of its wood products. Lumber is the most valuable of these; $45,000,000 worth was produced in 1940, a fourth of the total value of Southern Appalachian timber products. The whole region is dotted thickly with sawmills—about 5,600 of them, mostly of small size. In 1940, they turned out 1½ billion board feet of lumber and cross-ties; their hardwood lumber, more than a billion feet, was a fourth of the Nation's output. Fuel wood is easily the most abundant timber product, accounting for nearly half of the total quantity of wood cut in a typical year. Veneer and plywood are produced at 16 plants, and veneer logs are shipped to the borders of the region for manufacture. The hewing of railroad cross-ties and the cutting of mine timbers occupy some 13,000 farmers and other part-time woods laborers.

Discoveries

Even more varied, however, and offering brighter promise of an expanded future for forest industry in the Southern Appalachians, are those lines of production that break away from the region's tradition of large-tree and "board" forestry. With its relative abundance of small trees, the region is well suited to these types of industry and they have already gained a prominent place in the forest economy. Eight pulp mills consume close to a million cords of hardwood and softwood each year and turn out a product worth more than 25 million dollars. By distillation or chemical conversion, wood is made into rayon, alcohol, acetate, and a host of kindred substances. Thirteen of the 16 plants in the United States that produce tanning extract from chestnut wood are located in this region. Barrel staves or headings are made in 38 widely scattered small mills employing an average of a dozen men. Small-scale, also, are the 75 mills that manufacture a wide assortment of specialized articles directly from small logs and bolts. Typical of these are the 23 shuttle-block plants; they consume annually 10,000 cords of dogwood and produce the blocks from which 2½ million shuttles are made for the great textile industry of the piedmont and valley areas. In the domain of remanufacture, in 1939, the planing mills, paper mills, and factories producing furniture and wooden goods of various kinds added approximately $70,000,000 to the value of their raw materials, an amount equal to nearly four-tenths of the value of all timber products produced in the region.

These timber industries provided, in 1940, some 28 million man-days of employment in the woods and in the plants. Excluding the many workers who made fuel wood and other products for farm and home use, the timber industry employed 157,000 people, 10 percent of the total number of employed workers.

The majority were farmers and other rural residents for whom such labor provided a part-time source of cash income. However, 67,000 people had their major occupation in the timber industry, a number second only to agriculture and coal mining. The value of all timber products was $175,000,000, an amount probably equal to at least 9 percent of all income paid out in the region. And this is direct income from timber alone, not including returns from such other forest uses as recreation.

Questions

But now for a questioning look ahead. It is too easy to tell an optimistic story of the forest situation in the Southern Appalachians, using figures like these. The fact remains that incomes as a whole are low, and that more productive resource management is absolutely essential if incomes are to be raised. Granting that forests contribute substantially to current levels of living, may they be expected to contribute more substantially to higher levels? By what means? May timber production be sustained at the current rate, or even increased? Will there be markets for what is produced? There are some partial and tentative answers to these questions, and some lines of action that seem fairly clear.

Consider the resources of sawlog-size timber: Growth of the forest is adding to these each year at the rate of 2.1 billion board feet. This is net growth, after allowance for concurrent losses from fire, decay, insect damage, and natural tree mortality. In 1940, a fairly normal year, the total cut of sawlog-size timber was 1.9 billion board feet. In 1943 it was about 2.1 billion. Apparently saw-timber resources are scarcely holding their own.

And to take a closer look at this situation: Within the region in West Virginia and North Carolina there was a deficit in growth as compared with the cut, even in 1940. In all six States there was a deficit in the most favored kinds of trees—such as the pines, yellowpoplar, and white oak—and in larger trees of nearly all kinds. What is happening to saw-timber resources, then, is a gradual over-all depletion and a marked change in composition, the kinds and sizes of trees currently favored being on the decline whereas the less favored are on the increase.

Obviously, there is belt-tightening ahead. For the near future curtailed use of saw timber, at least of the choice kinds, is inevitable. Appalachian forest land and growing stock *can* produce good saw timber abundantly. But for them to do so, the growing stock must be allowed to develop. And more than that: it must be given active, intelligent management to reverse the present pronounced trend toward low-quality trees.

Measures Ahead

Two forest-management measures, particularly, are needed now. One is better protection of forests from fire. Fires burn over 3 percent of the whole forest area each year, killing many trees, but doing their worst damage by opening the way for decay, insect attack, and soil depletion. Within the region are about 65 counties not yet covered by the public fire-protection system, and in many counties the system should be intensified. The other measure is publicly enforced provision for cutting timber in ways that will better assure rebuilding the forest than do most present methods. Without fire protection and reasonable cutting practices, there is little use to hope for future benefits from forestry.

To supplement these measures, further public acquisition of forest land appears to be necessary. Part of this acquisition will be automatic if tax-reversion procedures are clarified. Other lands where timber values are exceptionally slow in maturing or where watershed or recreational values are paramount will need to be purchased.

These are measures for building a more productive forest and allowing eventually fuller use of sawtimber resources. But what of the intervening period? Perhaps part of the answer lies with the timber resources of less than sawlog size or quality.

Consider the resources of usable timber as a whole—cordwood as well as sawlogs: These are growing annually at the rate of about 10.3 million cords, while they are being cut at the rate of 7.4 million cords. A surplus appears in each of the six States, ranging as high as 140 percent of the cut in Georgia. This surplus is not all of good quality; but it represents non-sawlog material sufficient to allow necessary rebuilding of the growing stock of cordwood and to permit expansion of the cut, as well. If to this surplus is added the quantity of usable sawmill waste and of unused tops, limbs, and sound cull trees, the total reaches some 6 million cords a year—more than the entire current consumption of non-sawlog timber.

Foreshadowings

The existence of these supplies in a region as well located and as well endowed with labor resources as the Southern Appalachians should foreshadow post-war industrial development. The stirrings of such a movement are already felt. Here a corporation inquires into the availability of small timber for distillation and chemical conversion. There a State government studies the possibility of using sawmill waste to make alcohol and other products. Elsewhere flooring is being made on an experimental basis from undersize, low-quality logs; a small company makes plans to produce broom handles; a cooperative society investigates the opportunities for manufacturing wooden toys; a public agency tries to learn how semiprocessed wood products may be carried to a higher stage of manufacture within the region. But these are, as yet, only stirrings. More research is needed in ways of utilizing profitably the Appalachian reservoir of low-grade hardwood.

Problems

The two major forest problems of the Southern Appalachians, then, are to build up the resources and to utilize them more fully. Closely linked to these are two other problems that may stand as a threat to future expansion of forest industry.

One of these problems is in marketing. Timber resources are spread so thin that costly effort is needed to concentrate products and in some areas timber is spread so very thin that only local use is possible. Of the thousands of small timber owners, middlemen, and processors, few have real knowledge of timber products and markets. These circumstances make for unsatisfactory and sporadic contacts throughout the marketing chain. Part of the solution may eventually come through rebuilding timber supplies. Part may come through establishing well-managed, diversified concentration yards, possibly under cooperative auspices.

The other problem is a central problem common to the management of all Appalachian resources—underemployment of workers. In forestry, underemployment creates a deadlock: The existence of a large class of persons with opportunity to work only part time and for a low return tends to perpetutate a depleted and picked-over forest, a socially costly distribution system, and an industry that is insecure in being kept alive only through the subsidy of underpaid labor. Forestry alone cannot solve the whole underemployment problem. But forest resources can help to solve it—by fuller use, through wiser management.

Power Resources ARE *Hard At Work*

By KENNETH R. KENNEDY. *The revolutionary work of TVA in developing power resources has been accelerated by the demands of war.*

THERE is a region that is rich in the power resources which underlie progress in an era of technology and machines. The Southern Appalachians are rich in rainfall which provides ample stream-flows, in deep gorges which make admirable sites for great storage reservoirs, and in the slope of mountain streams which provide high heads for generation of electric power. It is endowed with rich reserves of high-grade bituminous coal for the production of electric energy and for a host of industrial uses. And it has a further resource of energy—not commonly thought of as such but nevertheless of immense possibilities—in the soil of its fields and forests and in a climate favorable to growth.

Use of these waterpower resources began almost as soon as the first settlers established themselves. On the small watercourses they built their simple grist mills, and in certain parts "waterground meal" is still looked upon as superior. Three-quarters of a mile below Norris Dam, on the Clinch River, providing a striking contrast to modern humming turbines is a small, log mill with giant overshot wheel which in season grinds cornmeal for tourists. Built in the last decade of the eighteenth century, the mill was still operating when engineers explored the mountain valleys now covered by the 72 winding miles of Norris reservoir.

Development of the region brought about the progressive utilization of the power resources to keep pace with increase in population, growth of towns, and advances in industrial technology, so that it is now dotted with hydroelectric and steam-electric generating stations. Though many of the mountain areas where the best hydro sites abound are sparsely settled, they are close enough to large population centers and more settled areas to be well within transmission distance. Advances in industrial processes have helped bring about power developments. Aluminum processing by electrolysis, for example, made feasible the investment of millions of dollars by the chief aluminum company in hydro plants and reservoirs in the Great Smoky Mountains of Tennessee and North Carolina.

Many hydro sites had been developed in the past, and there have been such large recent developments as the multiple-purpose dams of the Tennessee Valley Authority, and the Nantahala and Glenville Dams on the Nantahala and Tuckasegee Rivers in North Carolina and the Claytor Dam on the New River in Virginia, developed by privately owned companies. Nevertheless, many possibilities for waterpower development remain on the Cumberland River, the New River, and other streams.

Coal and waterpower resources have helped to assure efficient and economical power developments, for despite the debate that on occasion rages furiously over the relative merits of the two types of generation, the commonly accepted fact is that the best results are usually obtained by a combination of the two. The region has seen both steam and hydro plants rise near its mines and on its streams and has benefited by the effective teamwork they provide.

That part of the Appalachian region which lies in the Tennessee River basin, stretching southwestward from western Virginia to Muscle Shoals in northern Alabama, has seen perhaps the fastest and most comprehensive power development during the last 10 years, and particularly since 1940, when power demands for the production of war materials came in earnest. Here the TVA has been charged with the development of water resources as a part of a broad program of regional development. In this program, power development does not stand alone but is an integral part of control of the river to reduce or eliminate the destructive floods and to create a modern inland waterway, of the industrial and agricultural development, and of activities for the development, conservation, and wise use of basic resources.

Since its establishment by Congress in 1933, the TVA has completed 14 dams, and all but 1 of them lie within the boundaries of the Southern Appalachian region, as do 5 of the 6 dams acquired through purchase or transfer and 4 of its 5 steam generating stations. Of the 1,834,000 kilowatts of installed generating capacity on its system today, more than 1,560,000 kilowatts are in this region. In comparison, only about 540,000 kilowatts of the capacity now included in the system were in existence in 1933, of which about 400,000 kilowatts were located in the Southern Appalachians.

Much of the expansion has taken place during the last 4 years under the spur of war, with the capacity of the system nearly doubled since June of 1940 and with power being produced at the rate of 10 billion kilowatt-hours a year. Three-fourths of the output goes to war purposes.

Alerted

This tremendous contribution to power for war, enabling the production of aluminum, airplanes, guns, shells, ships' boilers, army clothing, explosives, and many other items, stems directly from the orderly plans for multiple development of the river begun in 1933. In that year, TVA began construction of a series of seven dams in the Tennessee River which, with two existing dams, has transformed most of its 652-mile course into a stairway of long lakes.

By the middle of 1940, six dams—Pickwick Landing, Wheeler, Guntersville, and Chickamauga on the mainstream and Norris and Hiwassee on the tributaries—had been completed, and other mainstream dams were under construction. Thus TVA was in a favorable position to provide new supplies of power with great rapidity. It had the seasoned engineering design and construction organization to inaugurate new projects immediately and to carry them through on time. It had the fundamental information concerning potential power sites. Moreover, the construction of new storage reservoirs at the headwaters not only provided energy at the new power plants but through the release of stored water during periods of low stream-flow would enhance the power-production capacity at downstream plants.

War Expansion

To meet war power demands, Congress since July 1940 has authorized the construction of nine dams and one of the largest steam-electric plants in the South—all in the Southern Appalachians. Six of the dams—Cherokee, Apalachia, Ocoee No. 3, Chatuge, Nottely, Douglas—are now in operation. Fontana, which will be the highest dam east of the Rockies, is progressing rapidly. The Watauga and South Holston Dams, relatively less important for power production, were begun but were later held in abeyance on orders of the War Production Board. The new Watts Bar steam plant is in operation. On the mainstream, Watts Bar and Fort Loudoun Dams have been completed under wartime schedules.

In line with the trend all over the country, power systems have become more closely interconnected in order to make maximum use of generating facilities. Bearing out the adage of the ill wind, this trend was speeded up during 1941 when, in addition to unprecedented demands for power, the Southeast was struck by a severe drought. To keep vital war production going full blast, new interconnections were rushed through and new operating agreements were worked out. Thus TVA and other power systems, some of them far removed, cooperated to funnel power far in excess of normal demands into war industries.

Salvage

Here the great hydro reservoirs provided the means for salvaging large quantities of off-peak steam power which otherwise would have been lost to war production. At night and over weekends, when power demands fall off, many steam plants ordinarily are idle or produce far below capacity. But TVA was able to take the off-peak steam power and use it to meet its own power requirements, meanwhile reducing its hydro generation and storing in its reservoirs the water that otherwise would have been used. During the week, when power demands rose again, the stored power was either restored to the steam-generating systems to help meet their loads or was transmitted to war plants. In this way, these huge reservoirs in the fiscal year 1942 saved about half a billion kilowatt-hours of energy which otherwise would have been lost.

Progression

Expansion of power resources for war is helping to lay the foundation for peacetime development of the region, for ample supplies of power are essential to almost every phase of economic and productive activity. The TVA regional development program of which electric power is a part stems back historically for more than a century, when the Federal Government made its first attempt to improve the Tennessee River at Muscle Shoals for navigation. Power possibilities were brought to the fore around the turn of the century, when President Theodore Roosevelt vetoed a proposal for private power development on the ground that the Federal Government should reap the benefits in order to help finance other river improvements. The first World War resulted in the construction of Government-owned nitrate plants and Wilson Dam. Later, the growing menace of floods called attention to the need for reservoirs to impound dangerously high flows at the headwaters to protect settled and industrialized areas below.

Broad Concept

In the TVA Act, Congress coordinated these three objectives of river control into a broad concept of regional development which envisaged the orderly development, conservation, and use of all resources—water, soil, forests, and minerals. Power was viewed as the "paying partner" in engineering development of the river, and in the past fiscal year brought TVA gross revenues of $31,674,000 and provided nearly $13,150,000 in net income after all power expenses. Low rates charged by the 128 municipal and cooperative electric systems which distribute TVA power have vastly increased the use of power by ultimate consumers. Average residential consumption exceeds 1,600 kilowatt-hours per customer per year, more than 50 percent above the national average. Increasing amounts of power helped to swell industrial production of the TVA region.

With the lengthening of the commercial navigation channel, traffic on the Tennessee has increased rapidly, more than doubling in 4 years. Large quantities of military supplies have been carried on the Tennessee River, including as many as 600 jeeps, trucks, ambulances, and weapon carriers in a single tow. Petroleum, grain, coal, and iron move on the river in increasing quantities. To speed the wartime use of the river, TVA has constructed and is operating new navigation terminals at four principal river ports on the Tennessee, all within the Appalachian region. Flood damage in the Tennessee basin has been markedly reduced.

Interrelation

Power in the TVA program is more than a commercial venture; it is viewed as a tool. Research is carried on to increase its benefits to industry and agriculture, as in research on the quick-freezing of fruits, vegetables, and meats and in the electric firing of pottery kilns. Rural electrification has been pushed—there are now, in all, 80,000 farms using TVA power, few of which had service in 1933—and extensive research has been done on application of electricity to farm tasks, such as feed grinding, irrigation of truck farms, and chicken-raising. All of this research may have direct bearing on the development of Appalachian resources.

TVA power, used in the electric phosphate furnaces at Muscle Shoals, plays a vital role in agricultural development in the Appalachians and elsewhere. In the Muscle Shoals plants, new and improved forms of concentrated phosphatic fertilizers have been developed by electric furnace methods.

Renewable Source

Building up the soil creates a renewable source of energy. In the Southeast, with ample rainfall and long growing seasons, the opportunities for use of this resource are great if only the soil is properly protected and enriched with essential minerals.

Land already is helping to provide energy for machines as well as for the men who run them. In European and South American countries, charcoal provides gas to run cars. In parts of Europe, even before the war, gasoline was eked out with alcohol. The greater the industrialization sought in the Appalachians, the greater will be the demands on the soil for both energy and raw materials. Automobiles today are running on tires from the wheat fields, and automobile bodies of soybeans are said to be but a step away.

Well-being

The Southern Appalachian region, in common with the rest of the country, envisions a future of well-being based on technology and industry. To meet the demands of this development, it is essential that the inexhaustible and renewable sources of energy—water and soil—be conserved and wisely used.

Recreation— *WHEN WAR IS DONE*

By ROBERT M. HOWES. *Increasing thousands have found refreshment and stimulation among these peaks and valleys; the war's end will probably bring an expansion of the facilities for recreation and the requisite time to enjoy them.*

THE Southern Appalachian region is a land rich in the natural and cultural resources which make up a recreation area. Located at the crossroads of tourist travel across the eastern half of the United States, it offers a variety of recreation opportunities within easy reach of two-thirds of the Nation's population. It is a land of ancient mountains and new lakes, of running streams and sparkling waterfalls, of wooded ridges and open valleys. Here lived a race of prehistoric people and, later, the Creek and Cherokee Indians, whose warpaths and trading routes threaded the region as do the tourist highways of today. Scotch-Irish settlers followed these routes or blazed new ones across precipitous mountain walls. They brought a hardy culture and an inherent love of liberty that is alive today in current thought as well as in ballad and legend. In the past two centuries battles that shaped the course of our country's history were fought here—Fort Loudoun, Kings Mountain, Chickamauga, and Chattanooga. In the present century, men and materials of war are pouring from the region to play their part in shaping our country's future.

Areas so richly endowed offer exceptional opportunities for conserving, developing, and utilizing their recreation resources. With a few notable exceptions, however, little of this had been done in the Southern Appalachians until recent years. Then the activities of several Federal agencies, together with an awakened local interest in the possibilities of recreation development, set in motion an active recreation program which was interrupted only by the fall of Japanese bombs on Pearl Harbor. The war period has served as a time for reevaluating objectives and for planning a resumption of activity with the advent of peace.

The Blue Ridge Mountain Province which forms the southeast flank of the region is the loftiest, most concentrated mountain mass east of the Mississippi River. The Appalachian Range, extending southwest from Maine to Georgia, culminates within this province in rugged peaks, separated by narrow coves and valleys. High annual rainfall assures ample flow in stream courses, interrupted by frequent waterfalls and cascades. Abundant moisture and a wide range of temperatures, varying inversely with the altitude, promote rich and varied plant growth. Trees, shrubs, wild flowers and ferns range from southern river-bottom types to the north-woods species of Canada and Hudson Bay. Warm summer days and cool nights prevail. The Great Smoky Mountains National Park and surrounding national forests offer many and varied scenic and recreational attractions to the year-round visitor.

The Cumberland Plateau, extending from Kentucky through Tennessee and into northern Georgia and Alabama, forming the western portion of the region, is edged by a nearly continuous palisade of vertical cliffs rising above wooded slopes which drop abruptly to the lowlands. Views from these cliffs, varying from restricted glimpses across interior gorges to distant panorama across adjacent lowlands, contribute in large measure to the plateau's scenic interest. Waterfalls and unusual rock formations abound. State park and forest areas distributed rather widely over the plateau offer vacation and day accommodations to the visitors. Newest public recreation area is the Cumberland Gap National Historical Park for which land is now being acquired.

Between the Blue Ridge Province and the Cumberland Plateau, the Valley of East Tennessee, the southern extremity of the Great Appalachian Valley, stretches its 40-mile breadth from Virginia to Georgia. Its undulating agricultural lands are creased by a series of parallel woodland ridges breaking the valley floor into minor valleys. Although climatically and scenically not so well suited to recreation as the flanking mountains and plateaus, this valley holds considerable interest because of its developed recreational facilities, exemplified by the system of lakes formed by the reservoirs of the Tennessee Valley Authority.

Restorative

. . . and the leaves of the tree were for the healing of the nations.

—Revelations 22: 14

Before 1933, development of the Southern Appalachians as a tourist center had been chiefly confined to two areas. About 1820 the first of a number of resort hotels and communities was established in the eastern fringe of the Blue Ridge Mountains to serve wealthy visitors seeking relief from the summer heat along the Atlantic coast. Many of these developments were speculative; they were short-lived or gradually declined. A few have survived. The Asheville area provides the most striking example of continuous promotion and popularity of resort development.

The second area of major tourist attraction, the Great Smoky Mountains National Park, was created by the Congress in 1926, funds having been donated from public and private sources for the purchase of the land. Hundreds of thousands of visitors from all parts of the country annually enjoyed the scenic beauties of the park until the war restricted automobile travel.

Inauguration of the TVA program in 1933 gave a great impetus to the development and use of the recreational resource of the Southern Appalachians. The river-improvement program has resulted in an extensive public domain of lake and shore, supplementing recreation attractions. Impounded water—even in reservoirs built primarily for navigation, flood control, and power—has a special significance in this region. The glacial ponds and lakes occurring in more northern latitudes are lacking. The gradual transformation of unrestrained silt-laden streams into clear blue lakes with unbroken expanses of open water creates tremendous recreation potentialities in country that is comparatively devoid of natural bodies of water.

Added Attractions

The system of TVA lakes in these Appalachians includes five lakes on the Tennessee River itself—Guntersville, Hales Bar, Chickamauga, Watts Bar, and Fort Loudoun; Norris, Cherokee, Douglas, Fontana, and Hiwassee lakes on its principal tributaries; and seven reservoirs of lesser recreational significance on other tributaries. Three additional projects are authorized. Upon completion, these lakes and reservoirs will impound a total of some 300,000 acres of water surrounded by 5,000 miles of shore line, most of it publicly owned.

TVA activities have attracted many visitors. Norris Dam, not far from Knoxville, and the Newfound Gap highway through the Great Smoky Mountains National Park were completed at about the same time, providing a double objective for ever-increasing tourists. Improvement of other highways, and the recreational development undertaken by the Civilian Conservation Corps in the National and State parks and forests also contributed to the new interest.

Multitudes

Boating, hitherto relatively unimportant, became a pastime for many. Garages became marine-engine repair shops, carpenters became boat builders, and village stores stocked fishing tackle and bathing suits to meet a growing popular demand. The handicrafts of the region found a widening market. The lakes, plus the new recreation activity awakened the people to the social and economic importance of their recreation resources.

Public agencies responded to the quickening popular interest. The National Park Service, U. S. Fish and Wildlife Service, U. S. Forest Service, State conservation departments and planning commissions, to mention only a few, engaged in joint enterprises with local groups to conserve and develop the region's diverse attractions. Recreation became a heavily patronized and lucrative industry which, in Tennessee alone, brought an income of $104,000,000 in 1941.

War Changes

Then came Pearl Harbor and the war, with its proper and insistent demands for the diversion of labor, materials, and facilities to provide the means to win the peace. What ultimate effects may be expected from this temporary reorientation of thought and activity?

Obviously, basic natural resources—scenery, location, and climate—can scarcely be materially altered. The progress made by the various public agencies in acquiring and developing recreation areas has been halted, but gains are being consolidated and will not be lost. Minimum maintenance programs insure the preservation of natural values and protection of buildings and equipment against loss by fire, depreciation, or vandalism. Private agencies and individuals are less well equipped to maintain the services and facilities they have developed. The mortality in this group will be high, particularly in the fields of roadside services, but highest losses will be experienced in the marginal operations.

On the Books

Among the greatest opportunities for the expansion of new recreation facilities in the region are those around the lakes and reservoirs. By purchasing riparian lands surrounding or adjacent to its reservoirs, the TVA has insured their availability for recreation development in response to public needs and requirements. At the close of the war the resources resulting from this system will be available for development according to plans which have been outlined in cooperation with other Federal, and State and local agencies.

The prospects for establishing in the Southern Appalachians a large-scale public-works program in the field of recreational development, and based upon a real public need, are excellent. When peace is restored, private enterprise will find among the people there an equally enlightened realization of the needs and the opportunities for private investment. Much of the general and some specific planning has already been completed.

Title

Title to a certain piece of earth is one of our more or less useful human fictions. Leave in enough time, and we are all natives and all interlopers. The only true title to things is use, and good use in the long run is good title, while bad use is bad title. We will soon lose what we cannot use well, no matter how sure we are that we own it.

—Ferner Nuhn, in *The Wind Blew From the East,* Harper & Brothers.

Handicrafts AND A WAY OF LIFE

By ALLEN EATON. *We cannot leave the Southern Appalachians without inquiry about the future of the handicrafts, for to the mountain people they are economically, socially, and culturally noteworthy and to others the country over they are the very symbols of the region.*

TO ONE WHO has followed the development of handicrafts in the Southern Highlands from the revival 40 to 50 years ago to the present time, the changes that have taken place in the character and variety of the products are significant. It is not a static industry though it is practiced in remote and sometimes primitive surroundings. If he tries to visualize the future he feels both hope and dread—hope because of growing cooperation to improve quality and to extend markets, and dread that in the process of improvement and adaptation to customers' requirements some of the best uses and values of these handicrafts may be lost.

For handicrafts, together with small and often inadequate acreages, form the base upon which many mountain families and communities build their present and their future. This is true in both an economic and a social sense.

It is not an exaggeration to say that at Brasstown, N. C., under the encouragement of the John C. Campbell Folk School, when the people of that rural community found they could whittle what others would buy, they determined to whittle their way out of many of their difficulties. Members of 10 to 20 families have been whittling industriously for several years, adding from one to several hundred dollars to their annual cash incomes. In this process they develop frequent contacts with each other and occasionally with the world outside. The wood at their dooryards is whittled into forms that are useful, beautiful, or amusing, and finds its way into homes all over the country.

Success has been experienced through other handicrafts in many small places in these mountains. Often even the very old are highly skilled. Pottery, weaving, dying with color from native plants, metal work, musical instruments, furniture, toys, baskets—the products are legion. Color, form, quality, design, naïvety, and usefulness all play their part in making this work known far and wide. The objects vary with the materials at hand, the inherited skills, the aptitudes, and the available guidance and outlets.

The larger viewpoint visualizes these handicrafts not only as a source of income but as a source of satisfaction to those who make and to those who buy them, and as a means for perpetuating a culture and a way of life. Modernized methods, models, and designs will continue to make the people more conscious of the importance of the handicrafts as a real economic and cultural resource, around which long-time plans can be made.

The Southern Highland Handicraft Guild, organized some 15 years ago, gives examples of the normal progress that may be on the way. Besides including many individual workers, it comprises the leading handicraft centers of the region—Allanstand Cottage Industries, the John C. Campbell Folk School, the Penland Weavers and Potters, the Spinning Wheel, all of North Carolina; Fireside Industries, Hill Crafters Guild, Pine Mountain Settlement, and Hindman Settlement school, of Kentucky; Shuttle Crafters, Pleasant Hill Academy, and Pi Beta Phi Settlement School, of Tennessee, and many other handicraft centers in these and the other Appalachian Mountain States.

This guild has staged extensive exhibits at several strategic points and times, occasionally under sponsorship of recognized art institutions. These displays have enlisted the permanent interests of many people and organizations in many parts of the country. At its annual meetings the Guild is concerned with such problems as quality, designs, trends, and outlets. Several large central shops have been opened for the sale of southern handicrafts—notably those at Asheville, N. C., at Norris Dam in Tennessee, and at Rockefeller Center in New York City. Valuable aid has also come to the movement through the Office of Indian Affairs, the T. V. A., the Agricultural Extension Service, and other Federal agencies.

> *Volunteers*
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> *Thousands of persons trained in handicrafts have become a reservoir of skilled workers from which the American Red Cross, the USO, and similar agencies are drawing volunteers.*
>
> —M. L. Wilson

Influences

Several influences tend to perpetuate the fireside industries. Most of the mountain families own their homes and are far from evening distractions. They need these added earnings. For generations they have been accustomed to work with their hands and have often acquired real skill and taste. Many of the materials they use—wood, clay, plants for vegetable dyes, wool—are at hand. Guidance and outside interest in their work grow with the years for there is a definite appreciation among both young and old in the outside world for the rich colorings, the beauty of design, and the quaintness and originality of these home-made, hand-made products.

Opposing influences are obvious. Commercialism in most phases operates against the handicrafts. Many people value the mechanical uniformity of commercial products above individuality and they do not realize the necessity for the higher price of the object that has often been painstakingly worked out by hand. The tendency toward speed, including the demand of the customers for prompt delivery, militates against some of the best handicrafts.

War Impacts

Many skilled craftsmen are serving with the armed forces and others have gone into war industries thus diminishing the supply of handicrafts. War also has cut off the imported work that appeals to the same people who appreciate our hand-made objects. The loss of imports, the increased earnings of our people generally and other influences have meant increased sales of handicrafts at the larger city centers as in Washington and New York City. But the elimination of pleasure driving has reduced roadside and local sales. Just how well these influences may have balanced each other cannot be closely estimated but the indications are that the movement has not suffered unduly in its essential and enduring elements because of the war.

Looking Ahead

More normal times will bring the motorists and vacationists back to mountain roads and to the National Parks and will revitalize those outlets. A purchasing power stabilized somewhere near the present is planned for in influential quarters. The devastation of foreign lands may mean that peasant products will long be absent from our shops. On the other hand the rehabilitation of many of our returning veterans will include learning to make attractive and salable handicrafts. Our Southern Highlanders and their friends will do their part toward welcoming these therapeutic measures. And among those who will be thus working their way back to health will be men and women from the Southern Highlands who have practiced these arts before and will not be newcomers among those who would produce for sale. Boys and men in the services, now on every eastern continent, have written home of their longing to get back to their handicrafts again.

Just what the future may be for the handicrafts of the Southern Highlands cannot be spelled out exactly but, judged by the long and varied history of the movement and by our deductions from present trends, it seems safe to believe that they will continue to play a real and valued part in the economy and culture of the mountain people.

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The land was ours before we were the land's. —Robert Frost

Books

Food "Crisis". By *ROY F. HENDRICKSON.* Doubleday, Doran and Company, Inc. Garden City, N. Y. 274 pages.

WHEN "food went to war," agricultural surpluses which had been called a scourge of the thirties disappeared. Becoming a strategic factor, food entered a period of so-called crisis resulting from scarcities and Roy Hendrickson was drafted to perform the difficult mission of "dividing our food supply to do its maximum job." Since his appointment as director of the United States Food Distribution Administration, his agency has become the greatest buyer of food in the world. A man who is responsible for food purchases averaging eight million dollars a day speaks with authority on a subject which is of as general civilian interest as the ubiquitous ration book, of as great international concern as the feeding of the United Nations now and the hunger-stricken world presently, and the needs of the military.

Mr. Hendrickson's factual analysis, placed in the setting of the development of the problem, is applied with social vision and technical competence, and is, in the opinion of your reviewer, one of the historic case-study documents in the necessity, methods, and morals of social control for a common welfare on a global scale.

The science of nutrition, effectively applied to the military requirements and refined by poll methods to supply menus which men like best, has strengthened morale as well as physical stamina and resulted in important economies. With the needs of nutrition as the yardstick, the Food Distribution Administration determined the civilian share in advance and then proceeded to distribute the food by rationing, thus tending to equalize consumption without reference to income. Such a process of distribution, of necessity, forces the reorganization of food habits. This fact is nowhere more vividly emphasized than by observing that, prior to the war, people with annual incomes of $1,000 to $1,500 per year consumed twice as much beef as people with incomes of $500 or less, and that people with incomes of $5,000 or more consumed over 40 percent more meat than the $1,000 to $1,500 group.

Lend-Lease programs will make about 10 percent of our agricultural production available to our allies in 1943; Mr. Hendrickson shows that our food contribution represents 300,000 railway carloads. In dealing with the cost of lend-lease, the author asks, "How do we assess the cost of human lives against food?"

POINTING OUT the tragedy of starvation of occupied countries, the author analyzes the experience of liberated countries to find the pattern for feeding the countries to be released from Axis domination.

Except for a strong and resolute program of price ceilings, subsidies, savings, and taxation, he says that the continuous rising trend in the cost of living may bring "consequences in human misery, second only to the human cost of war." The story of how agriculture has met production schedules is related in a brilliant chapter entitled "Food Begins on the Farm." Contrasting the British and American ways of administrating the food front, the author assures us that "we shall have enough to eat" (about 4 pounds each day).

Looking to the future, Mr. Hendrickson emphasizes Secretary Wickard's thesis that Food Will Win the War and Write the Peace. Stating an "objective for peace" to be a "supply and distribution of food to assure a fully adequate diet, nutritionally," he observes that "a nation that can build a war machine of terrible strength should be able to forge a peace economy that will be equally strong. The war that takes things away from us at the very time we can afford to buy them should not be followed by a peace in which we have the ability to produce what we want without the ability to distribute that abundance. This need not be, unless we let it."

Food "Crisis" is the manifesto of a courageous agricultural statesman just as much as it is a superb case study in the tactics and strategy of effective administration of one of the toughest jobs of the war epoch. What appeals to your reviewer quite as much as the technical competence is the deep social sensitivity with which the mission is being executed, the conception of brotherly sharing which is a sequel to the Biblical story of Joseph, and the faith that intelligent government can and must play, and is actually playing, a redeeming role in our common life in "one" world.

—*Paul F. Douglass*

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FOOD. By *FRANK A. PEARSON* and *DON PAARLBERG*. Alfred A. Knopf. New York. 239 pages.

FOOD FOR PEOPLE. By *MARGARET G. REID*. John Wiley & Sons, Inc. New York. 653 pages.

WARTIME FOOD MANAGEMENT: AN ANALYSIS WITH RECOMMENDATIONS. By *JOSEPH S. DAVIS*. (The Economic Sentinel of the Los Angeles Chamber of Commerce, Vol 1, No. 1). 46 pages; and FOOD AS AN IMPLEMENT OF WAR: THE RESPONSIBILITIES OF FARMERS. By *JOSEPH S. DAVIS*. Food Research Institute, Stanford University, War-Peace Pamphlet No. 3. 20 pages.

FOOD ENOUGH. By *JOHN D. BLACK*. The Jacques Cattell Press. Lancaster, Pennsylvania. 269 pages; and WORLD NEEDS FOR U. S. FOOD AND FIBER. By *JOHN D. BLACK*. National Planning Association. Washington, D. C. Planning Pamphlets 25 and 26. 71 pages.

WE ARE once again discovering food. Food crises, food conferences, food statistics, food shortages, and even some food surpluses have all followed one another or been so intermingled as to give rise to a great deal of argument. As a result, we are now beginning to see a stream of analyses which are designed to simplify the food situation, or at least serve as a basis for a better understanding of where we are and what lies ahead.

According to Messrs. Pearson and Paarlberg, we have allowed ourselves to be led into a senseless "food muddle" at a time and in a situation where neither controls nor administrators are actually needed. Shortages can be offset by increasing the use of cereals for food, and an equally simple solution is offered for the "tangle" of roll-backs, subsidies, ceilings, ticket rationing, and black markets—freely fluctuating prices with every man for himself and the devil take the hindmost.

Miss Reid and Messrs. Davis and Black are not so sure about the ease with which our difficulties can be solved, although each of them is especially well qualified to discuss food. All three are, or were at the time their material was published, working outside the Federal Government, all were working for institutions whose standing is well recognized, and the interest and acquaintance of all three with the food situation are exceptional.

APPARENTLY, all three authors would agree with the statement in the opening section of Miss Reid's book where she distinguishes between economics as a science devoted to the description of facts and relationships which aims only at enlightenment, and as a normative science concerned with the general welfare and improving the lot of mankind. All three are sympathetic to farm people and their difficulties; but all three are also convinced that food production should be increased, that food costs should be controlled, and that available supplies should be equitably distributed.

AFTER her opening section, Dr. Reid endeavors to summarize recent research and statistics relating to food for most of 600-odd pages, returning to the welfare argument in the final section where she recognizes that "food for people has a central place in freedom from want. There is a growing spirit of community, national, and international responsibility that all persons should be well fed."

Davis and Black are more directly concerned with the current food program and the prospect ahead. Dr. Davis decries intentional exaggeration, calamity howling, and overstatement, and approaches the situation with a conviction that "our food problems are genuine, troublesome and serious enough, and no end of them is in sight. But there has been no 'food crisis' worthy of the phrase, and none will need to arise." As a result, Dr. Davis achieves a sane and rather careful discussion of the food situation in *Wartime Food Management,* and goes on to stress that farmers must use their collective strength not only in their own interest but also in the national interest in *Food as an Implement of War.*

ACCORDING to Dr. Black, food producers and distributors of the United States now have almost the strangest assignment that could be imagined, so strange that their minds have not yet been able fully to realize it. This assignment is "to produce and distribute every possible pound of human food" and the central theme relating to the situation is that there is no physical reason why enough food cannot be produced, processed, and moved into consumption to meet all the reasonable needs with which we are faced.

Dr. Black summarizes food needs for our Armed Forces and war workers, for civilians, and for our allies and foreign relief (these needs are discussed at length in *World Needs for U. S. Food and Fiber*). Factors affecting production—manpower, machines, and materials—are next considered, and the background is thus set for an analysis of the foods we could produce, of desirable shifts in production and consumption, of food rationing and price control, of distribution difficulties, and the concluding sections relating to "food international" as well as our own domestic situation following World War II. *Food Enough* was written with the average reader in mind and it is certainly as readable, as accurate, and as able an analysis of the over-all food situation as has yet appeared.

—*O. V. Wells*

THE TENNESSEE VALLEY AUTHORITY. A STUDY IN PUBLIC ADMINISTRATION. By *CHARLES HERMAN PRITCHETT*. The University of North Carolina Press. Chapel Hill. 333 pages.

THE AUTHOR readily admits to a pro-TVA bias, but this reviewer fails to find that it has prevented an interesting and factual presentation of the background, birth, growing pains, and present status—with a peek at future possibilities—of an American institution that is developing within the lifetime of those of us who are today working in agriculture.

The 25-page introduction carries the reader from Muscle Shoals to TVA—from World War I to 1933. In Part One, the program of the Authority is presented: Water control, power finding a market, power operating problems, regional planning and development. At this point the reader has been exposed to a quick review of the legislative and legal obstacles taken by this gigantic economic and social Government experiment in providing power, flood and erosion control, water transportation, recreation facilities, and a means of providing work and better living conditions for local families.

Actually, Part One serves as a preface to the main subject but, as the author contends, "To understand TVA administration it is necessary to understand the TVA program." If the book ended at this point, we would have a miniature of the growth of an inland empire. TVA has completed or has under way 23 dams, and controls some 14 others throughout the Basin. Erection of power plants, fertilizer manufacturing, a network of transmission lines; satisfactory cooperative arrangements with municipalities, farmers, and others; extensive soil conservation and improved forestry practices—these are a few of the possibilities that have now been proved as feasible under a planned economy, backed by the Government.

FUTURE application of the lessons thus learned to several similar areas within the United States is entirely possible.

Much of the section on Administration is concerned with the rising difficulties incident to three-man directorship, the preliminary attempts to combine policy-formulation and administrative responsibility in the hands of the board, the impossible situations that both author and reviewer believe are bound to develop when more than one pilot holds the wheel. At the top level, misadministration is emphasized, culminating in the discharge of the first chairman. So much emphasis is given to this phase of TVA history that one might wonder at the success this whole venture has attained. The reader is led through evolving circumstances wherein administration is finally centered in a general manager, while policy determinations are made by the board of directors, much as in other corporations.

A considerable degree of corporate freedom has been exercised by the Authority since its inception. In the matter of financing it has been notably unhampered in its relationship to Congress and the Bureau of the Budget. Finances are obtained from appropriations, revenues from the sale of power, etc., and income from the sale of bonds. Annual accounting is rendered to Congress and the President, and annual appropriations were stabilized at around $40,000,000, until the national emergency speeded up the planned construction program. Wrangling over GAO procedures, covering 7 or 8 years, was dissolved by a compromise wherein some autonomy was maintained by TVA, with governmental audit by the Comptroller General.

Freedom from the Federal civil service system is emphasized as a factor that has made the administration of personnel outstanding in its success. A merit-service system, however, in both the selection and the promotion of employees has been in force since the beginning. A central personnel-management staff has been relied upon throughout—a staff that emphasizes its service rather than its control functions.

Classification sheets for jobs in various fields, developed with the Federal system as a guide, make procedures comparable. Rates of pay, system of promotions, and efficiency-rating techniques are likewise similar, but a student of administration will find the unique differences very interesting. An essential difference is the right of supervisors to fire employees for just cause, presented in writing.

As the author well says, it is good to have this example, for the world into which we are moving will have increasing tasks for such agencies to perform.

—*Ralph H. Rogers*

Roots in the Earth. The Small Farmer Looks Ahead. By *P. ALSTON WARING* and *WALTER MAGNES TELLER*. Harper & Brothers, Publishers. New York and London. 202 pages.

HERE IS A DEFENSE of the small family farm and of public policies which the authors believe can strengthen and preserve it as an economic and social institution.

The family farm is not sharply defined, but it is implied to be something approximating a 60- to 100-acre Bucks County, Pa., farm, like those operated by the authors. These authors avoid the extreme doctrines of self-sufficient subsistence practices typical of many small-farm enthusiasts. There is strong advocacy of home supply of meat, milk, poultry products, and vegetables and fruits, but there is clear-cut recognition that the farmer wants those products of industrial civilization which necessitate commercial farming and cash income.

The modern world of technology and its effect upon agricultural practices is explicitly recognized. But there may be question as to whether modern technology can be efficiently utilized upon small acreages as widely as the authors indicate. There is no explicit desire to escape the complications of the modern world. There is a chapter entitled "You Can't Escape into Farming," and the theme is eventually repeated several times, although seemingly not always with complete conviction. The policies and the programs that are proposed or supported are based upon a fundamental recognition of the interdependence of farmers with the rest of society. This is not social escapism but rather the reverse, and as such is to be commended.

The authors would seek the strengthening and perpetuation of the small farm fundamentally through social action as distinguished from the action of individuals. They are enthusiastic supporters of cooperatives, the SCS, the FSA, the USDA generally, and of planning and socially minded measures to conserve land and to assist and preserve the family farm. They see a cleavage between the large and the small farmers, and feel that the small farmer's interest is identified with urban labor and even with farm labor, rather than with the larger farmers or with representatives of urban capital. The Farm Bureau, the Grange, the Associated Farmers, several of the large cooperative associations, and the Farm Bloc are pictured as unfriendly to small farmers.

A PROGRAM is advocated which includes the extension of the Social Security

Act to include farmers and farm laborers, rural taxation based entirely on income rather than on land value, and a sharp reduction of interest charges for agricultural credit. Many of the ideas seem good, though not new. The book would have been much more substantial if it had discussed these proposals thoroughly, in terms of specific means to be employed and ultimate ends to be gained.

The authors are men of wide reading and experience. They speak of the very different conditions of agriculture in some other parts of the country. But their farm philosophy appears deeply colored by their own experience in Bucks County, and there may be considerable question how well it could be adapted to many other areas where small farmers face quite different circumstances.

The tone of the book is definitely liberal in the sense that the authors are motivated by a desire to see economic benefits more widely and presumably therefore more equitably distributed. They want to equalize opportunity and relieve the oppressions of the poor, and they identify the more favored groups as the principal barrier to a realization of this ideal.

Roots in the Earth will probably appeal principally to city people. This is not to say it does not reveal a good knowledge of farm practices—it does. But it emphasizes phases of farming and social ideals which are more directly the concern of urbanites who wistfully look at the beautifully rolling countryside than of farmers intent on the price of hogs in Chicago. The style in which the book is written features a self-conscious rusticity and much synthetic, cellophane-wrapped earthiness. There is also a foreword by Louis Bromfield that does the book a disservice by suggesting an obscurantism in what is to follow that fortunately does not develop.

—*Paul H. Johnstone*

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THE BAYOUS OF LOUISIANA. By *HARNETT T. KANE.* W. Morrow & Company. New York. 340 pages.

A FEW HOURS spent with Mr. Kane's readable account of what he has seen and known in the bayou country in southwestern Louisiana leave us feeling that here is one of the most distinctive corners of the whole United States. His book is not intended for scientists and historians, but even they will appreciate the skill with which this newspaper man, author of the very different *Louisiana Hayride,* shows how nature and man have worked together in developing its life and ways.

From his first chapter, "Pattern in Life and People," we get a sense of the bayou as something which is neither a constant current nor a stagnant swamp and of the way in which drainage from the land to the north and tides and winds from the Gulf struggle for supremacy in this land in the making. The struggle is of course most apparent to the South, where the region still teems with an amazing variety of life on paw and wing and fin. Very varied too are the human strains that have found foothold here. Indian, Spanish, English, and many others have left their mark, but it is the French peasant who has left the deepest stamp.

Mr. Kane confines his story to the sections he himself knows intimately, but fortunately these cover both the more changing and watery country near the Gulf and the more stable lands behind. He introduces us to the Wet Front Yard, the area just east of the mouth of the Mississippi, where the battle between land and sea still goes on. Here the pirogues of the trappers must "travel on a dew" along narrow shifting bayous, the houses are often no more than stilted shacks perched on precarious bits of soil, and a hurricane can sweep away an outlying island with its summer hotels and visitors. On the southern edge large-scale fish, shrimp, and oyster industries now carry on with workers of all nationalities.

Progress was easier further inland, where fixed soil made agriculture possible, at least in spots. Bayou Lafourche, for example, winds its slow length to the Gulf and its natural and improved levees have produced two narrow strips of fertile land which, taken up in the patriarchal French way, now give unbroken successions of small holdings. The bayou, by boat and bridge, has thus become "the longest village street in the world." Life along its banks is rooted in old French custom and religion, though adapting itself to the political and economic developments of the country to which its people give wholehearted allegiance. The speech is predominantly French, but isolation from the mother-country and additions from Indian, Spanish, and English neighbors have made it a thing by itself.

LIFE is not easy, nor does wealth pile up, but if we can believe Mr. Kane's picture, there can be few places where people derive more genuine satisfactions from the combination of good hard work with strong family ties, open-handed friendliness, and a wealth of simple good times. A sign of the last is the prosperous business in records of French folksongs and dances which are in high favor for the many gay festivals in every community.

More like the traditional Old South is the Teche country. Here better lands have meant more prosperous existence and allowed a few great estates with romantic stories of luxury in the wilderness.

The chapter "Where the Buggies Roll" takes us still further north, where the features of the bayou region merge into those of the prairie country. Grain, cattle, and horses make the scene look quite different. Nevertheless, in language, in old-time customs, and in leisurely, neighborly ways it resembles Bayou Lafourche. Throughout, the pictures really illustrate the text. Eventually we hope Mr. Kane will tell us whether the other parts of the bayou region are equally distinctive and illuminating for the interplay of land, water, and racial stocks.

—*Helen W. Atwater*

BURNING AN EMPIRE. By *STEWART H. HOLBROOK.* The Macmillan Company. New York. 229 pages.

LET NO MAN who loves trees or the trillium of the forest floor plan to spend an easy evening with Stewart Holbrook's *Burning an Empire.* For before the first half hour is done, he will have gone through that ominous stillness that precedes a forest fire. The dimmed sun becomes a red ball, then darkness settles down. A blanket of spooky light is overhead, low rumblings on the horizon. Cats and dogs grow strangely restless. But why get panicky? We've seen smoke on the edge of these woods ever since we've lived here. The breeze gets stronger, that rumbling louder, the light brighter. Men rub smoke out of their eyes, clear their throats of ashes flying horizontal with the ground. Here and there fire breaks out from falling embers—nearer and nearer until the family abandons its home in the clearing and flee for their lives.

In town the wind-blown live coals birth blazes one after another. The explosive burning of the forest approaches; flame-tipped gusts of wind dart high into the sky, a flaming plank from an outlying sawmill falls in front of the bank on

Main Street. More blazes spring up. Fire engines and water hose are impotent. Frightened people clamber on a waiting train, which pulls out when the paint on the coaches begins to drip, and ends of the cross-ties are on fire. Or families pile into a swamp ahead of the stifling breaths of death, to be joined by wild animals who have lost their lesser fears.

More people have been killed by forest fires than were ever killed by the Indians; more timber destroyed by fires than has ever been harvested by timbermen. The author describes great fires: at Hinckley, Minn., in 1894, 400 people were burned to death; at Cloquet in 1918, the fatality list exceeded half a thousand. Among other fires described are the Peshtigo disaster in 1871, the great fires in Wisconsin in 1894, and in the Lewis River Valley of Oregon in 1902.

Fire in Idaho and Montana in 1910 so aroused the press and President Theodore Roosevelt that the ground work was laid for programs for systematic protection of forest lands. But even today more than one-third of our forest lands are wholly without protection. And in protected areas under certain weather conditions forest fires are still beyond man's control. In low humidity on hot days at the end of dry spells an accidental spark may set off a holocaust. When the Tillamook fire of Oregon in 1933 ran through dry Douglas firs, 3,000 men working around the clock made no impression. Twelve and one-half billion feet of sawable timber was burned—more than had been used the year before by all the sawmills, lathe mills, shingle mills, and pulp mills in the whole country.

SPECTACULAR among fires was the burning of the abundant gorse at Bandon, Oreg., 1936. The leaves are oily when green and when dry. A fire broke out and made holiday in the gorse, with great oily gobs exploding 50 or 100 feet in the air, throwing balls of fire across the roofs of the town. Man worked in vain. Death was at large.

After Holbrook's fire and thunder comes his insistent small voice: Even greater damage is done to the present and the oncoming forests by the many small fires. He speaks especially of fires in the South, which seldom make a headline or are the direct cause of a death, but which each year account for nearly two-thirds of the Nation's loss from forest fire.

He speaks knowingly of the cause of most forest fires—blazes to clear back the underbrush, to open up new land for cultivation and pasture, to keep back marauding animals from isolated homes. Our forests had been every man's enemy to be overcome before pioneers could support their families, before cities could be built. Then came automobiles, and people with picnic baskets and matches for a camp fire and a cigarette. And he reminds us that, since Pearl Harbor, Japanese planes have three times dropped firebombs in the forests on the Pacific coast.

Close-observer Holbrook has worked with the State and national forestry people. He writes hopefully of the efforts to control fire. And he reluctantly admits that even forest fires are not wholly without compensation, for aspen grows a thicker stand because of the increased suckers or shoots, while the stone-like cone of the jack pine, unresponsive to nature's ordinary efforts, will sprout only after intense heat on the forest floor has destroyed everything else.

But the reader is never allowed to become comfortable so long as he is uncertain about the last match he struck, and the last camp fire he enjoyed. Even Thoreau, New England's great nature lover, does not escape his own conscience, for he returned to Concord, one town meeting day in 1844, humbled by the hundred acres of "pretty woods along the Sudbury River" which his camp fire had set ablaze.

—Arthur Raper

THIS FASCINATING LUMBER BUSINESS. By *STANLEY F. HORN.* The Bobbs-Merrill Company, Publishers. Indianapolis, New York. 328 pages.

AS BOOKS with analogous titles dealing with the railroad and oil businesses are advertised on its cover, this is evidently one of a series relating to the part private industry plays in the American economy.

The story is told in an engaging fashion, enlivened with interesting historical and personal sidelights and anecdotes. The description of logging, lumber manufacture and seasoning, manufacture of allied products, distribution and marketing, although sketchy and perhaps superficial, should prove informative to the layman.

THE publisher's flyleaf keynotes the aim of the book as primarily to dispel a popular belief that there is danger of timber shortage and to cultivate confidence not only in wood as an adaptable and versatile material destined to play a continuing and widening part in the life of the Nation, but also in the ability and readiness of the lumber industry to meet conservation requirements. But the author's overoptimism on the resource situation and exaggeration of industry progress in forest practice lead the reviewer to discount the claim that the picture "is at once as complete, thorough and accurate as any expert could demand." For example, the statement that "sustained-yield cutting has been the practice of most of the timber owners in the [Northeast] for a long time" cannot be squared with the finding of a 1942 report of the National Resources Planning Board in New England that "only about 2 percent [of the commercial forests] can be said to be under sustained-yield management."

EVEN for the South, the region with which the author is most familiar, his optimism is not shared by the Executive Secretary of the Southern Pulpwood Conservation Association, who recently wrote, "The heavy drain on timber resources in this region, especially for pulpwood and sawlogs, has made members of the pulpwood industry definitely apprehensive lest the timber supply close to their mills be severely depleted, necessitating longer hauls . . . Furthermore there are, in my opinion, only a few areas in the South in which timber growth more than offsets total drain."

Overstatements on timber supply and timber growing will be exposed by thoughtful reading of subsequent chapters where evidences of regional timber depletion and of lost or waning forest industries frequently crop out. For example, stating that the great majority of all sawmills today are of the circular sort because band mills are "not justified except where there is the assurance of an adequate, long-time supply of timber or logs," seems to take the glow off the rosy picture of timber supply. And in the discussion of the pulp industry, the author admits that "in some regions . . . the competition between wood-using industries for the visible timber supply is already acute." The author, in another place, wisely commends the endeavor to integrate paper and lumber activities in order to realize maximum utilization of the available timber.

IT IS a disappointment to find no mention of the progress in or need for forest management and other research to achieve a permanently high level of forest productivity, along with the creditable account of the utilization research conducted by Government agencies, universities, forest products industries, and industry associations.

The reviewer agrees with the author that through publicity of recent years, "some people have been misled into thinking that the time is just around the corner when all the forest resources will be channeled into the manufacture of chemical and synthetic materials." The points that much chemical utilization is based on the availability in large quantity of waste from the lumber industry and that tonnage requirements for chemical conversion are not likely to approach those for lumber and timber products might well have been further developed.

The book begins and ends on the question of timber supply. This emphasis on forest conservation in a book about the lumber industry and necessarily limited to highlights is significant. It reflects a widespread and encouraging recognition that forestry is of major public importance. Indeed, there is reason for justifiable pride in the number of industrial forest landowners who have adopted long-range forestry programs in recent years. But in the light of the inadequacy of the forest-growing stock, or capital, throughout the East, and the extent to which current requirements are being met by premature cutting of young timber, it is regrettable that the author, in his zeal to present the industry in its best light, merely echoes the industry's campaign of complacency which has been publicly challenged as misleading by the Chief of the Forest Service.

—*C. Edward Behre*

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Let a person have nothing to do for his country and he will not care for it.

—John Stuart Mill

THE INDEX to Volume VI of the Land Policy Review will be mailed upon request made to the Bureau of Agricultural Economics. Also available upon request are copies of the Indexes for Volumes III, IV, and V.

WARTIME GOVERNMENT IN OPERATION. By *WILLIAM H. NICHOLLS* and *JOHN A. VIEG*. Sponsored by the American Council on Public Affairs. The Blakiston Company, Philadelphia. 109 pages.

"THE PURPOSE of this book is, therefore, to review wartime policy-making and administration in two selected fields—manpower and food—and insofar as possible to determine how general governmental attitudes and machinery may have prevented manpower and food programs from being as effective as they yet need to be." The authors reflect the industry and civic responsibility which have long characterized the scholars in the social studies at the Iowa State College, and the study is dedicated to T. W. Schultz.

The inquiry is focussed sharply on the statement of the record, in statutes and administrative orders in the two fields, and on the relevant attitudes and structure in Congress and the higher central directors of administration. It has too long been the fashion to ignore or deliberately depreciate the importance of structure and process in an attribution of supreme importance to vague "economic" factors. Hence the analysis of Congressional committee membership and procedure throws useful light on the meaning of the record.

The presentation of the administrative factor suffers somewhat from the avowed limitation self-imposed by the authors whereby the role of the bureaucracy is excluded from treatment here. That is their legitimate right. But much of the task of determining a public policy and inventing ways of implementing it comes, inevitably, if it comes at all, from the bureaucracy, whose function goes beyond "supervisory routine" and who must provide a knowledge and attitude of mind denied generally to the active protagonists of special interests.

If the final pages of recommendation do not seem as original and fresh as the fruitful conception of the study as a whole, it may be because here, too, one has to move beyond the self-imposed limitations to ask how far the American people are politically educated, geographically conditioned, and equipped by their experience and tradition, as well as institutionally organized, for the waging of a modern war in so sophisticated a manner.

Perhaps we have needed a longer period of assimilation of the crowded experience with problems whose emergence Turner noted in 1893. However, structure has been more important in the organization of thought, as Graham Wallas warned us, than it has been customary to admit; and the authors have given us a study which would serve admirably the uses of a discussion group—one composed of bureaucrats, let us say—exploring the question of what is the true nature and function and duty of the Departments of Agriculture, Commerce, and Labor. This is most useful pamphleteering on a problem of central importance.

—*John M. Gans.*

U. S. GOVERNMENT PRINTING OFFICE: 1944

IN THE PIEDMONT

We now plow horizontally following the curvature of the hills and hollows on dead level, however crooked the lines may be. Every furrow thus acts as a reservoir to receive and retain the waters; scarcely an ounce of soil is now carried away . . . In point of beauty nothing can exceed that of our waving lines and rows winding along the face of our hills and valleys.

—Thomas Jefferson

Land policy REVIEW

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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Contributors

Editorial Note: PRODUCTION NOW is the immediate job but post-war considerations naturally attract attention in nearly all phases of agricultural life. This issue of the Review reflects both facts—and marks Thomas Jefferson's bicentennial year.

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Agriculture Builds for the Future

By RAYMOND C. SMITH. *Here we learn of the chief essentials of agricultural planning, of the problems involved in the planning process, what, how, and by whom agricultural planning is being done, and why citizens should take active part.*

THERE IS a growing interest in post-war planning. Farm people are realizing that the Nation will face tremendous problems at the end of the war. They are showing an increasing concern about being prepared in advance to meet these problems.

In broad terms, post-war planning in agriculture is directed toward bringing about an enduring world peace and with it the opportunity for freer exchange of products between Nations and consequent rising standards of living in all Nations. It is directed toward attaining a healthy and expanding national peacetime economy, and toward developing a better agriculture and a higher standard of living for farm people.

Post-war planning *in* agriculture cannot be limited to planning *for* agriculture. The agriculture economy does not exist unto itself. It is an integral part of our total national economy, which in turn is an integral part of the world economy. Farmers have a real stake in world trade. They cannot neglect planning to bring about the kind of an enduring peace which will be conducive to freer and expanding world trade.

Neither can farmers afford to neglect to plan for a healthy national economy. They should throw their whole weight into the balance on the side of helping to plan for a growing and expanding national economy. The only way farmers can be prosperous over any considerable period is for their customers to be prosperous and have the purchasing power to buy the kinds and quantities of food needed for nutritious diets and to buy needed fiber and forest products.

Farmers therefore also have a real stake in full employment in industry at home. In fact, since urban people make up most of the farmers' market, and since, through differentials in birth and death rates between farm and nonfarm areas, many farm youth need chances for jobs in cities, farmers have even a greater stake in full urban employment at good wages than do most other groups.

It is possible that agriculture might center its efforts after the war on trying to get a larger slice of a small pie rather than make vigorous efforts, along with others, to assure a large pie. But an equitable share of a large pie would almost certainly be better for agriculture than an inequitably large share of a small pie, for without efforts to bring about an expanding economy a small pie is likely to shrink to an even smaller size. All of this is not to say that agriculture should not plan for agriculture itself. It is simply to say that an important part of the agricultural problem lies outside of agriculture, and that this portion must receive attention along with the rest of the problem.

Post-war planning in agriculture is really a twofold job. On the one hand, agriculture, a part of a national and of a world economy, has to plan, along with other groups, to bring about the kind of a national economy and the kind of international relations that it needs. On the other hand, it has to plan for making adjustments in agriculture to meet whatever national and international situations may actually evolve.

Unprecedented

Our unprecedented wartime production record, in both industry and agriculture, which has provided good jobs at good wages for substantially all of our people who were able and willing to work, has demonstrated what the Nation can accomplish when it has the will for great achievement. It has convinced most people that we need not have a disastrous depression at the end of the war if the Nation—the people that make up the Nation—wills otherwise. Yet it is possible that we could have the worst depression in our history at some time following the end of the war unless vigorous positive steps were taken to prevent it.

Potentialities Great

But if measures are carefully planned and put into action, and if meanwhile we develop positive plans to move forward when peace comes toward realizing fully on the great potentialities which our country provides, it will be possible for us to have a better agriculture and rural life than we have ever known.

Agriculture should be prepared to contribute its full share toward preventing difficulties during the demobilization and reconversion period and toward realizing on the great possibilities that lie ahead after the war. Yet at the same time it should be prepared with plans that will enable it to weather possible storms ahead if they are not entirely prevented. In other words agriculture should be prepared for any eventuality, after the war.

The People's Decisions

In our democracy the matter lies in the hands of the people. Their efforts and their decisions will determine whether or not the necessary steps are taken to avoid disaster in the years immediately following the close of the war. They will determine whether or not we take advantage of the opportunity to move forward to a better life for all of us in the longer-time future. The Department of Agriculture feels a responsibility to study post-war problems and possible solutions, and to place all obtainable information that has a bearing upon these problems in the hands of farm people and other citizens to aid them as they make these vital decisions.

Under Way

The Department's post-war planning activities are being carried on jointly by various agencies and bureaus, through interbureau committees and working groups, both in Washington and in the field. The Department and the Land-Grant Colleges are cooperating closely in the work.

Among the problems on which work is now under way are the following:

(1) Production adjustments in agriculture needed (*a*) during the demobilization period and (*b*) to bring about desirable production in the period following conversion from a war to a peacetime economy. The second part of this activity is pointed toward the year 1950, wherever a date is essential to the analysis. Within an assumed over-all framework of full employment and high national income, adequate nutrition for the people, international collaboration, and a high level of agricultural prices and income, an attempt will be made to indicate the pattern of crop and livestock production and the methods and techniques of production that should be followed, the amount of land that should be brought into or retired from production, the number and kind of farms that would be needed, and the labor force that would be required. Comparison of this pattern with the present situation will indicate the adjustments that would be necessary by production-adjustment areas and for the nation as a whole.

(2) Marketing and distribution during the demobilization period with some attention to longer-time problems. This involves work on the integration of food requirements of the United States with estimates of world supply and allocations; readjustments in processing and marketing facilities and methods; disposition of wartime regulations concerning food distribution; the place, if any, of price and rationing controls during the transition period; methods of insuring better nutrition among under-privileged groups; marketing and price measures designed to guide production and distribution; programs to maintain farm prices and income; and programs of cooperation with other exporting nations.

(3) Disposition of surplus land, supplies, and equipment used by military forces and war plants, including the use of chemical plants for manufacture of fertilizer after the war.

(4) Opportunities for returned veterans and others on farms after the war.

(5) Conservation and development of physical resources, including crop and pasture lands, range lands, and forest lands. Conservation has been a long-standing problem but the extra strain of war production on our physical resources

has increased the necessity for conservation measures. Development of new resources may be needed to meet post-war production demands. Plans are being developed to provide for acceleration in the application of conservation measures and for needed development work.

(6) Other long-standing problems on which post-war action is being planned lie chiefly in the domain of family living. Among these are rural health and sanitation, rural housing and equipment, rural electrification, social security for farm people, tenure, and credit.

(7) Agricultural-industrial relations and the place of industries in rural areas.

(8) Development of a shelf of works projects to be carried out in case the situation after the war calls for public action of this character. Works projects will be planned to accomplish many of the indicated improvements in the fields of physical resources and farm-family living, wherever the situation after the war indicates the development of works projects to be the most appropriate method of providing worth-while improvements.

Already

Work is being done on all these subjects both in Washington and in the field. It is hoped that reports on most of this work eventually will be available to farm people and others who are interested. In addition to a large volume of working materials, three national reports have been published as a result of preliminary work: (1) Agriculture When the War Ends—a mimeographed document of 57 pages, (2) What Post-War Policies for Agriculture?—a printed leaflet of 13 pages in the Farmer and the War series, and (3) Maintaining Demand for Farm Products: Demand for Farm Products Depends Upon the City—a multilithed leaflet of 10 pages. Several other reports will probably be available soon.

Discussion

Men are never so likely to settle a question rightly as when they discuss it freely.

—MACAULAY

A dozen or more staff members of the Department of Agriculture and of other Government Departments along with representatives of farmers, took part in the United Nations Conference on Food and Agriculture, at Hot Springs, Va. This was the first great effort at planning for food and agriculture in the international field. A publication by the Department called "American Farmers and the United Nations Conference on Food and Agriculture" tells the story of the conference, in brief, and last winter's number of the Land Policy Review was devoted to the highlights of the Conference.

During this past winter the Department and the land-grant colleges, working together, attempted to bring these problems and others into focus, State by State. Preliminary working reports were prepared in all States. In a few cases these reports were published by the colleges, but in most instances they are being used as a basis for additional planning work.

As Citizens

The Department believes that technicians of the Department and the colleges are being of real service to farmers when they collect the facts about post-war problems and analyze them for the public. But there is a limit to what public agencies can do. They can present facts and show the probable consequences of various alternative lines of action in meeting the problems. But it is the citizens themselves, farm families and others, who will have to study the facts carefully, and weigh them in terms of the interests and wishes of farm people, and then in terms of national welfare and future international cooperation. They will have to weigh short-run advantages against long-run benefits.

Prompt Action

This brings into view the opportunities and responsibilities of farmers as citizens in a democracy. The same is true of their farm organizations. Unless farmers as citizens, and as members of organized groups, study post-war problems now and evolve what they believe to be practicable and acceptable solutions, this Nation is not likely to be ready to solve post-war agricultural problems promptly, when the crucial need for their solution arises.

Weapon

Education is the chief defense of nations.

—Edmund Burke

Because of the complexity of these problems, and the fact that they extend beyond agriculture itself, farmers will find it necessary to consider many of them along with representatives of labor and of industry and they will have always to remember international phases and consequences.

Pledged

This is not an easy task. But it is clear that much can be accomplished. Much will have to be accomplished if agriculture is not to find itself in a very serious situation after the war. The Department of Agriculture stands pledged and ready to do all within its power to assist farmers, and other groups who are interested in agriculture, as they develop plans for meeting post-war problems. It is also ready to work with representatives of other segments of our economy in those fields that affect the welfare of all.

Throughout history, every big nation has been given an opportunity to help itself by helping the world.

—Henry A. Wallace

VETERANS & WAR WORKERS—BACK-TO-THE-LAND?

By V. WEBSTER JOHNSON. *There will probably be postwar settlement whether anyone wants it or not. Here are questions to consider, the essentials of a sound program, and some things to do now.*

AFTER all wars certain veterans, industrial workers, and others dislocated by the war, move to the land. In depressions, likewise, the land has often been a place of refuge for industrial and other urban workers and for elderly and disabled people who hoped for security, stability, and a good life. These experiences in the past have frequently brought hardship, suffering, and privation although of course many have found security.

Since the war began about a million and a half young men have left farms to serve in the armed forces. Probably double this number of farm people have taken jobs in war industries and other work. Before the war ends, thousands more will leave farms for industry and the armed forces.

But when the war is over many of these young men of farm background will want to return to farms. Others, without farm experience, may seek opportunity on the land as a means of livelihood and as a way of life.

Will the opportunities be large enough to absorb all of those who may want to farm? The answer is, No. Of the 4½ million persons who left farms during the last 2½ years, probably not more than a third could find full-time work on farms after the war as laborers, tenants, or owners, even if food production continued at current wartime peaks.

But there will be opportunities for some. Although the extent of the opportunities in farming after the war will depend upon such things as demand for farm products here and abroad, and upon jobs in the city, the range of opportunities is not small. They look about like this: Farmers grow old and retire. Some of the best opportunities to obtain good developed farms will come from this source. If retirement continues at the rate experienced in the last two decades there may be about 350,000 family-size farms of all types available to new operators in the first five years after the war. Many soldiers and nonsoldiers want a part-time farm. That is, they want to hold down a part-time job in the city and yet farm a few acres. There will be opportunities for people who want "one foot on the land" provided the other foot is firmly planted in an urban job.

This is not all. Approximately 250,000 new farms could be developed, if needed, through irrigation, drainage, or clearing work and through return of some military lands to their pre-war use in agriculture. The rate at which these lands could be developed depends upon the speed with which several large public-works projects are completed.

The need for farm products and consequently the demand for farms will differ under full employment from that in under-employment. So far as humanly possible, full employment must be maintained. Security for the future rather than fear and unrest should be a primary aim of social policy. If this is to be accomplished, agricultural leaders and farm people, along with other groups in our economy, must meet squarely the important issues and questions, the answers to which will determine the extent that the goals of jobs, security, and decent living are realized.

Questions

In addition to those who have succeeded, many people have failed in their attempts to settle on the land in the past and if things are building up to another movement back to the land—what should we do about it? A good first step is to do a little thinking about two of the important questions that we must face. For instance,

(1) Agricultural production on existing farms could be increased substantially within the next few years through improved farm practices with no expansion in our present agricultural plant. Will the markets be available to absorb this increase in production along with the increase resulting from new land development? *If not, shall we still encourage both, or one or the other, or neither?*

(2) The United States is essentially an industrial Nation, and will probably want to export industrial products to some predominantly agricultural Nations. *Are we prepared to take in return the products that such Nations will want to sell us?*

Decision Imperative

So, as a Nation we need to decide what we want to do. Do we want to increase production by using present farm lands more intensively, or do we want to open new lands, or will it be necessary to do both? We also must decide whether or not we will accept agricultural products in payment for industrial products. The decisions that are made on these and other questions will determine the direction of our settlement program.

Essentials of Program

Does this mean that until these questions are decided nothing can or should be done about settlement? We believe it does not. Certain things that we know now should be applied to the guidance of settlement that is sure to come in the months ahead.

Whatever is done to help people settle on farms should contribute to

United

On the duty of saving our land there can be no division among patriotic men and women.

—Maury Maverick

We have swung open the portals on a new world.

—The New Republic

the welfare of agriculture and of the Nation as a whole. A farmer wishes to make his maximum contribution to the over-all objective of adequate food and fiber for our own people and those of other countries. He also wants an income that will provide a living for his family equivalent to the kind enjoyed by persons engaged in occupations that require similar investment, skill, and labor. Farmers want to maintain many family farms with tenure and credit conditions that promote stability, security, and a chance to advance up the agricultural ladder.

Guiding Principles

The Department of Agriculture and the State Colleges and Experiment Stations are giving attention to the advisability of and the opportunities for bringing additional land into agricultural use, as well as opportunities on lands now in farms. Recently in a study on post-war problems undertaken jointly by the Department and the Land Grant Colleges, farm-settlement opportunities and what should or should not be done to aid returning soldiers and others to get established on farms were considered.

Some principles based on experience that should be followed in guiding those who want to settle on the land were developed in this work. Briefly, they are:

(1) Farm-family selection on the basis of experience, knowledge of farming, personal adaptability, aptitude and enthusiasm for farm life, is one of the most influential factors making for success. Accurate appraisal of a person's ability to farm is as important as accurate appraisal of the farm and its resources.

(2) Selection of a productive farm of proper size or land that can be developed into good economic units is essential to success.

(3) Experience indicates the inadvisability of large numbers of veterans concentrating in a new community to the exclusion of other groups. Group soldier settlement maximizes the social and economic problems in the adjustment to civilian life.

(4) The price of a farm must be based on its long-time earning capacity or "normal" value. Buying at excessively high prices has frequently loaded the purchaser with an unbearable debt obligation.

(5) Adequate credit arrangements should be available for the purchase of economic family-type units. A sound payment plan provides for variable annual payments of both principal and interest while the farm is being improved, in years of crop failure or depression and in years of high farm income.

(6) Competent guidance in farm management is needed by new farmers, particularly if liberal credit has been extended by the Government. Farmers welcome friendly, practical advice and counsel on desirable farm practices and Government programs.

(7) Agricultural programs should emphasize continued development and intensification of use of the areas that are permanently suited to crop production and the gradual retirement from farming of areas where the land resources are best

adapted to forestry, grazing, and various public purposes.

Now

Certain things can be done at the local level now. Specific arrangements should be made in each agricultural county under which all prospective farmers may find information about opportunities on farms and on new land. Thus they may be helped to avoid unsuitable places and directed toward desirable locations. Too often new farmers have received their information mainly from land-selling agencies rather than from qualified, unbiased sources. For example, although it can be learned what areas have benefitted from the reductions of floods in parts of the flood plains of the Mississippi Valley, farmers still buy farms and live on unprotected land in fateful ignorance of the facts, because no plan has been devised for reaching and informing the prospective settlers.

Differences

In any program directed to place veterans or others on the land, whether relating to infiltration into present farm areas or the opening up of new lands, such principles as here outlined must be the guides. But to carry them out calls for different techniques, mechanisms, and controls on different lands—on new-land farms in the Mississippi Delta as contrasted with farms in the Corn Belt or irrigated areas of the West. It is imperative that the best possible policies and programs be developed for the different situations.

Opportunities on farms in established agricultural areas need to be carefully explored. An analysis should be made of the number and size of farms on which (1) the operator has reached retirement age, (2) the land is suitable through intensified use and improvement to provide for additional farm families, and (3) two or more families may live although they are now single-family farms. More information is needed on undeveloped lands that can be made suitable for farming through drainage, clearing, or irrigation. Before it can be intelligently and safely developed into farms, a great deal of this land needs to be mapped in place as to soil, topography, cover, drainage, water supply, and cost of development. Accurate information should be made public on the human and monetary costs involved in improving cut-over lands, swamp lands, and dry lands. Probable returns or lack of returns should be determined. Measures to discourage or prevent settlement in areas that are unsuited to farming should be developed and applied.

To Summarize

To summarize, the land will probably again be looked toward as one means of meeting the social and economic problems arising out of maladjustments following the war. To prevent serious mistakes on the part of many people who may be seeking opportunities on the land, thoughtful planning and action are necessary now.

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We have treated our land shamefully, by and large.

—Russell Lord

ADVICE TO SETTLERS: *DON'T*

By GEORGE S. WEHRWEIN. *With his stand based on many years of study and observation, a State worker here boldly speaks his mind.*

WE ARE boasting that the farmers of America were delivering almost half again as many goods in 1942 as in 1919 with 3 million fewer people on farms than during World War I. There are fewer than in the years preceding the present conflict. In other words, the agricultural plant is meeting war demands with reduced manpower and with probably little or no increase in total land in farms. Furthermore, this is being accomplished with an astonishing number of farmers classed as "underemployed"!

The favorable position of agriculture is shown by the realized net income which rose from an average annual income of 4.7 billion dollars in 1935–39 to 12.5 billion in 1943. Farmers are now paying with 1943 war incomes for the farms they bought in 1940. Such golden opportunities naturally result in the capitalization of the earning power, and by the time the war is over, land values will have caught up with earning power—in fact they will far exceed it. Land values for the country as a whole have already risen more than one-third since 1941. That is comparable to the boom years following World War I. Much larger increases have occurred in several States. These rises are bound to spread to the entire agricultural area, including raw land that is not in agricultural production and in private ownership.

It is at this stage of the cycle that veterans and other post-war purchasers will have to buy their farms. But the chances are that they will have to pay for them out of greatly reduced and deflated incomes after the conflict is over.

What are the possibilities that the demand for farm products and the present level of prices will be sustained? Those who believe this will happen base their opinion on great post-war demands from a hungry world and on increased demands as we and other countries aim at full nutrition for all the people. Post-war demands are difficult to estimate. Much will depend upon the condition of agriculture in Europe and Asia. If the last war is any criterion most of the countries will be rehabilitated in a remarkably short time. Abundant shipping will bring supplies from far countries now excluded from the European market because of distance. A year or so after the war we shall find tariff policies, policies of self-sufficiency, subsidies, again determining our chances to export farm products.

Even though full employment may give our citizens the purchasing power to back up demands, full nutrition could be achieved by adding little, if any, more land to the existing area in farms and no particular increase in manpower on these farms. But it will mean shifts in land use within the present agricultural area and shifts in agricultural employment. Increases in demand because of better nutrition will be offset in part by the decreasing rate of population growth and our aging population.

About Face

In fact, instead of policies for increasing the acreage in farms and adding to the agricultural manpower in the post-war era, it would appear that our policies should be to help our agriculture to readjust to a relatively decreasing demand, lower prices, and a drastic deflation of land values.

While the demand for farm products will decline after the war the supply will not be reduced. Manpower will automatically be increased with the return of farm boys to the home farms and the home community when they are demobilized. Agriculture always has a surplus population because there are more births than deaths in the open country. This natural oversupply is augmented by city people who move to the country or who decrease the land available for settlement by buying farm land for whatever purpose. Some of these are part-time farmers. Others buy for security in a period of anticipated inflation and still others buy for sentimental reasons.

No occupation gets more free advertising than agriculture, by novelists, philosophers, and publicists, who talk romantically about farming as a way of life. All of this is capitalized by land boomers, both public and private. Should we have another urban depression, the rush to the farms seen in the early 1930's may be repeated. It would again add to the costs of relief, education, and public services in counties predominantly rural and frontier in nature.

Finally, there are those who believe that the nation should have a large farm population irrespective of the consequences on the size of farms, efficiency of production, and impact on the agricultural economy. But there is no danger that we shall ever have any deficiency in agricultural population!

Curious

It is a curious and interesting fact that farmers' organizations have rarely, if ever, attacked the complex problem of low prices, unsatisfactory incomes, and the low level of farm living by trying to close the door to outsiders or by setting a limit on the acreage of land in farms. Perhaps agriculture does not lend itself to such restrictions but at least farm organizations might protest against policies for *increasing* acreage and manpower in agriculture.

Automatic

In spite of the fact that we do not need more land in farms, we can expect a continued automatic increase in the area of land in farms, in shifts to "higher" land uses of land within the line fence, and in higher production per acre. These things happen in spite of low prices for farm products. Land in farms will be increased by the new lands opened recently in the Mississippi Delta, by the return of military lands to farming, by irrigation in the Grand Coulee and other projects. Crop acres on existing farms are increasing steadily. The 1940 census reported 42 million acres in farms which might be used for crops after being cleared, 8 million acres of potential cropland that could be used after drainage, and 6 million acres that could come in through irrigation.

That's Efficiency

And here comes increased production through improved techniques, new varieties, fertilization, and mechanization. These processes have been stimulated by the war and will not be discontinued just because the war is over. This affects both production and manpower—productivity per worker is speeded up and increased. Output per agricultural worker has nearly tripled since 1870. This progress has been chalked up in spite of the fact that half of our farmers produce 90 percent of the products that enter commercial markets. This is an important impetus in any program of full nutrition for nonfarm people.

Other Half

Perhaps it is idle to hope to bring the other half of our farmers up to the same level of production, but to the extent they move in that direction it will be done by reducing the unemployment on farms, by better management, use of better equipment, increase in the size of farms, and retirement of submarginal land. In other words it will be done with a shrinkage in farm acreage and decrease in manpower—and not through an increase. Yet in some sections "settlement plans" are being proposed that will restore forest land to a farm classification so that it may be sold to service men.

If these statements are even approximately correct, there is no need for post-war settlement that will add to the total farm acreage and to the manpower on farms.

Veterans

As for the veterans who are returning to farming and really need land, they should be assisted in buying the farms that will come on the market through the retirement of farmers. More elderly farmers are active now than usual. This type of settlement would not add to the manpower on farms or to the total area of land in farms. The chief difficulty would be the high price of land in well-established communities, the rather large capital it would take to buy a farm there, and finding adequate credit on suitable terms. The old temptation will still be there to go to the poorer areas where land is cheaper or to vacant lands on the frontiers.

Why?

For some reason "soldier settlement" has always been associated with settlement on raw, uncleared, or unreclaimed land. Somehow this idea appeals to writers, legislators, public officials—and especially to the

There can be little delay in this business of farming.

—Claude R. Wickard

"land-boomers." Just why soldiers should be encouraged to try their luck at land settlement in localities where for 25 years civilian experiments in farm making have failed, is hard to comprehend. Roy J. Smith, in his study of the California State land settlements at Durham and Delhi, who published his findings in *Hilgardia*, issued by the University of California, states that the paramount reason for the failure of these colonies was the nature of the land selected, although it has sometimes been charged against inadequate management, administration, credit facilities, and the incompetence of the settlers, many of whom were former soldiers. Analysis and studies had to be made after the Settlement Board had bought the land. If feasibility studies had been made first the sites might not have been bought. Even more significant is the conclusion in the report that the Settlement Board of that State had only a few worth-while tracts to select from, in 1918, although the belief was general that California had millions of acres suitable for farm development.

On Guard

Actual past experiences should put everyone on guard against an easy acceptance of the suitability of any land for agriculture. Moreover, everyone should realize that there will be costs of clearing or reclamation and costs while waiting for income. And there will be, almost inevitably, a low level of living before such new land is in full production. Our veterans deserve something better than being "placed" on land that turns out to be a lifelong liability.

Counteracting Policy

Policy statements that start with the premise that veterans and workers in wartime industries will go to the land and that it is our duty to direct them, find land for them, and help them get started, simply put the stamp of approval on post-war settlement. This will complicate post-war adjustment problems in agriculture and bring disappointment for the settlers. In a short time we would have to have a new set of public programs to counteract the settlement programs of the post-war era. We would have price policies, reductions of so-called surplus production, and buying out settlers inadvisedly placed on land during the land boom.

It is important that public agencies point out the facts. To do so is to formulate a policy which will help to counteract the traditional tendency to "put the soldiers on the land." It is to be hoped that foresight will provide a post-war world with full employment in all sectors of our economy and that industry and commerce will offer adequate inducements to returning veterans. Public agencies should guide and assist these men to find places in all occupations—not in farming only.

Negro Farmers As Producers

By SHERMAN BRISCOE. *Big food totals have been rung up by Negro farm families under the stimulus of war and with the help of loans; even larger volume will come with more adequate supervision and guidance.*

NEGRO FARMERS have the potentiality for making still larger contributions toward wartime food production. They operate no less than 681,790 farms, covering more than 30 million acres, according to the 1940 census. Negro farmers operate 11 percent of the farms in the United States. Although most of their farms are small, their families are often large. If properly guided in intensified farming operations this extra manpower could produce a large volume of food. Even before the war, and with limited guidance and facilities, Negro farmers produced more than a half-billion dollars worth of farm products. Their output has increased measurably under the stimulus of war. Last year almost to a man they worked out and signed farm-production plans, calling for bigger and better gardens, or more poultry and hogs, or the addition of a milk cow, or more field crops including peanuts and soybeans to help meet the shortage of vegetable oils.

Several thousand Negroes operate highly specialized farms. In Delaware and Maryland hundreds have gone in for large-scale poultry raising. Some have as many as 30 thousand broilers a year; others collect eggs from 5 thousand and sometimes 6 thousand layers. Throughout several areas of the South there are nearly 10 thousand Negro commercial truck farmers. Many have formed cooperatives and are shipping carloads of vegetables to market and to processing plants. And increasingly Negro farmers are taking to dairying and livestock raising. Farm Security Administration has helped scores to shift over from cotton to beef cattle in the Black Belt of Alabama and in other States of the Southeast.

That more Negro farmers are not growing food crops or producing more fiber crops is traceable directly or indirectly to the lack of modern facilities, operating capital, and effective guidance. But now the U. S. Department of Agriculture is stepping up its program for providing loans and supervision to farmers for wartime production. The two major agencies concerned with making low-interest rate loans to potential war-production farmers are the Farm Security Administration and the Farm Credit Administration.

Hard-pressed small farmers, sharecroppers, and tenants who need some assistance to grow Food for Freedom can go to their county FSA office and talk their problems over with members of the staff. Those who are eligible for a loan may file their applications then and there. Within a few days FSA supervisors visit the farms of the prospective clients and determine what type of assistance is needed. One applicant may need a pair of mules or a brood sow. Another may need fertilizer and seed for an enlarged garden. For another a milk cow and some baby chicks may be best. Or his wife may want advice on home canning so she can preserve the right kinds and quantities of food. Whatever the problems, the FSA supervisors consider them carefully and then work out a plan with the farmer and his family to help them get started on the road to increase. These small low-income farmers could not obtain a loan elsewhere.

Loans

The size of the loan the farmer receives depends directly upon his ability and the ability of his family to grow more war crops but the family rehabilitation is not lost sight of. The loans carry a 5-percent interest rate and are usually spread over 5 years. FSA also makes loans to promising tenants, croppers, and day laborers so they can buy farms of their own. Inspired by ownership, many of these families have doubled their production records. Farm-ownership loans carry a 3 percent interest and are amortized over a 40-year period. More than 63,000 Negro farmers are on the FSA's program, being helped through loans and supervision toward making a larger war contribution. Of this number more than 5,000 are buying farms of their own under the Bankhead-Jones Farm Tenant Act.

The FCA follows a more orthodox procedure. Its war program is directed toward financing wartime food and fiber production, financing the processing and marketing of farm products, and curbing inflation. Lending units of FCA include production credit associations, the emergency crop and feed loans, and the national farm loan associations.

Nearly half of the 530 production credit associations are in the South. One of these made loans to Negro farmers totaling $2,000,000 in a single year. Negroes hold membership in several of these associations and they have some associations of their own.

All of these units have helped the families to put their farms on a full wartime footing. Both the FCA and the FSA have Negro agriculturalists on their staffs to advise on methods and procedures; as they work with farmers on different economic levels their techniques are somewhat dissimilar.

A Need

But loans without adequate frequent supervision cannot bring the best results, especially among many small farmers who have never had experience or schooling in modern farm management. Negro farmers suffer doubly from lack of supervision, because otherwise the bi-racial pattern of the South, where 98 percent of all Negro farmers live, shuts them off from valued channels of information. Either colored farmers are not invited to important agricultural meetings where the discussions would add greatly to their total understanding of over-all farm programs, or if invited they are forced by custom to sit quietly off in a far corner, asking no questions. This means that they usually fail to comprehend fully the policies and procedures involved.

Expanding Supervision

To offset this handicap, Dr. F. D. Patterson, president of Tuskegee, and Claude A. Barnett, director of the Associated Negro Press, who have been added to the staff of the Secretary of Agriculture as special assistants, have consistently urged the enlargement of the present Extension staff of 580 workers, and have advised the addition of Negro personnel to the staffs of all major agricultural agencies operating in the various States. Already, in keeping with their recommendations, 6 Agricultural Adjustment State offices have appointed Negro contact representatives, Soil Conservation Service has added more Negro technicians in some of its districts, Farm Credit Administration is considering the development of a Negro field staff, and through a special fund provided by the War Food Administration 272 Negro emergency war food aides have been appointed by the Extension Service in the Southern States.

Youth Succeeds

With Extension's Negro personnel temporarily increased from 580 to 852, further increases in production by colored farmers are reasonably assured. Not only will many diffident farmers plant their crops, and start their broods of poultry and pigs with greater confidence, but the 4–H Club members stand a better chance of increasing their membership and upping their production. Since the outbreak of the war their membership has increased from a little over 190,000 to nearly 220,000. These youngsters are fully enlisted in the war effort. They have collected hundreds of carloads of scrap and bought over half a million dollars' worth of war bonds and stamps. They do farm chores and are raising thousands of tons of food. Last year 20,000 Negro 4–H clubbers each produced enough food to feed one or more fighting men. Their work is reflected in the 30 million chickens, 100 million dozen eggs, 2 billion pounds of milk, and the 620,000 Victory gardens that Negro farm families produced last year.

Secret

The secret of success is constancy to purpose.

—Disraeli

Foresight

At the same time these farmers are producing more, many of them are learning to take better care of their land than before. Preventive and improvement work, begun under the stimulus of payments for soil-building practices, is continuing and is being taken up by new farmers under the guidance of the Soil Conservation Service. More and more the Negro farmers are getting away from soil-exhausting one-crop farming and are maintaining fertility for future production.

Through the Rural Electrification Administration thousands of Negro farm families now have electric lights and electric appliances. These increase the efficiency of the farm plant and help to assure full production now and later.

New Viewpoint

Obviously, Negro farm families are playing an important part in our wartime food-production program. At least a part of their success stems from the fact that they now see themselves and their jobs from an almost entirely different perspective. Once they looked on farming as devoid of opportunity. They remained on the farms mainly because they didn't quite know how to get away. But now farming is a war job. The products of their hands, their plows, their hoes, and their long hours of toil are needed to win a war. The Marine in the foxhole of New Guinea, the sailor in the hold of a submarauder prowling the South Pacific in search of a Jap prey, the soldier at Cassino are all counting on our farmers, colored and white, to keep them supplied with food. And so, farming has taken on a new importance for Negroes of the South.

After the War?

And when victory is won and peace comes again, what about the prospects of the Negro farmer? Will he carry over into the post-war era these new patterns of food production and "live-at-home" that have been the mainstay of victory? Will returning veterans looking for farms to start life all over again crowd him still farther into the poor submarginal areas and into city slums?

These are haunting questions that relate to much more than farm production. But only production is considered here. Negroes have a somewhat natural affiliation with the soil, and no matter how much they are pushed to the poor lands, or how fast they drift to the cities and to other industries, for a long time to come they are going to be an important factor in American agriculture. Given supervision and technical aid approximating that made available to other farmers generally, and assuming that Government aid will be extended during the transition period, there seems reason to believe that production for peace and for "freedom from want" can be maintained among Negro farmers at somewhere near levels now reached. And through this continued food-production program, Negro farmers should be able gradually to climb from an 80-percent tenancy to substantial ownership with improved farms and better homes.

Food Fights for Freedom

How Tenancy Retards FOOD PRODUCTION

By ELCO L. GREENSHIELDS. *Tenancy as a land problem is ever before us—in peace and war. The demands of war bring new emphasis.*

WAR has brought the subject of tenancy again to the fore. New figures illuminate it. The unprecedented effort to increase our production of food and fiber is interfered with to a significant extent by some of our tenure arrangements. Farm tenancy has presented a serious obstacle to speeding up production in many areas, and to shifting production from some of the plentiful field crops to strategic war products like livestock, dairy products, and certain protein crops.

Tenure arrangements obstruct in several ways our efforts to increase production. Typically, tenant farming is characterized by short-term leases which prevent long-range planning and reduce efficiency of operations. Too much emphasis is placed on cash crops. Tenants often cannot get or make improvements, so they do not adopt diversified crop-livestock farming. These barriers are not easily overcome, but the stakes involved are apparently high enough to justify positive action.

Until now we have not had an adequate measure of the extent to which farm tenancy restricts production, except for a few spots. Through a special study by the Bureau of the Census of the 1940 census returns, "Value of Farm Products by Color and Tenure of Farm Operator," a break-down of the value of farm production is now available by major tenure groups—full owners, part owners, managers, tenants, and croppers. Together with other facts that we have on the land and labor resources at the disposal of each of the tenure groups, these data make possible an over-all appraisal of the relative production capacity of each group. The data are for the year 1939 when the total volume of all farm production was one-sixth less than in 1943. But it is believed that only modified shifts in the relative production capacity of the tenure groups have taken place within that time.

In 1939, 39 percent of all farm operators were working under some tenancy arrangement—crop share, livestock share, cash rent, cropper, or some combination of these. Less than 1 percent were operating under manager arrangements; 10 percent owned a part of their farms and rented additional acreage; 51 percent owned all their land.

Tenants produced 32 percent of

the value of all farm products. They had 29 percent of all farm land comprising 40 percent of all land planted to crops. Owner and manager farms, representing 61 percent of all farms, included 71 percent of all farm land and 60 percent of the cropland and were responsible for 68 percent of the value of all agricultural commodities. Thus, from the land invested in tenant farms, we received proportionately less than we did from the resources represented by owner-operated and manager-operated farms. This is true even after allowances are made for the somewhat lower quality of land in tenant farms, and for the effect of the concentration of cropper tenancy in the South. In Kansas, for example, where there are no croppers, where tenants and owners operate similar types of farms, and where the total figures are not unduly influenced by the enumeration of large numbers of part-time owner-operators, the tenants produced 37 percent of all products. But they had 45 percent of the farms comprising 40 percent of all land, 43 percent of all cropland.

Potentialities

The immediate question is whether this lower production on tenant farms should continue. Is it an inevitable result of our tenure system? Or can we step up production on our tenant farms? If their level of production could be raised to the level achieved on full-owner farms (using value of land exclusive of buildings as a measure of amount of land rather than acres of cropland or of all land), the potential increase in total output from all tenant farms would be something like 18 percent. If the level on tenant farms could be raised to the level of all other farms, it would mean a 10½ percent increase in value of their production. By the same measure, in Iowa where both tenants and owners are high producers, it would take a 20-percent increase in production on tenant farms to equal that of the owner-manager group.

Barriers

The kind of production coming from our tenant farms is definitely of concern in war times. Tenants with 40 percent of the land planted to crops in 1939 produced 45 percent of the field crops sold or traded; they produced only 26 percent of the livestock and livestock products. Even in Illinois, where tenants are outstanding livestock producers, they raised only 42 percent of the livestock with half of the land resources of the State in their farms, according to valuation. In the decade of the 1930's tenant farming contributed heavily to the problem of so-called surpluses. Now tenancy stands as a barrier to shifting production away from cotton and tobacco and toward more butter, eggs, milk, and oil-producing crops.

Exceptions

In making these broad assertions, it is not implied that all tenants are falling behind owner-operators. Significantly different production patterns are followed by tenants in the different regions. A tenant who rents his farm on a livestock-share basis in the corn-hog or the dairy region probably does as well as

Should Be

America is another name for opportunity.

—Emerson

owner-operators. In the East North Central States, for example, tenant farms, with 37 percent of the total cropland, produced 44 percent of the field crops entering the market and 30 percent of the livestock and livestock products. There the value of land in tenant farms averages 10 percent more than that in full-owner farms. This is the only area in which tenant lands exceed in value, and this explains their high production. In this region the notable difference between production from tenant and from owner farms is in the kind of products rather than in the quantity of production.

Croppers

The over-all United States production record of strategic war crops by tenant farmers is reduced materially by the southern cropper group, which includes nearly one-fourth of all tenants. These croppers are almost exclusively single-crop farmers. Operating 12 percent of the cropland in the South, they grew 21 percent of the field crops of that region, and contributed 13 percent of the value of all of its farm products. Their livestock production was less than 3 percent of the total for the South and less than 1 percent of the total for the country.

Southern croppers usually farm under arrangements that restrict the livestock. In the plantation system, land is used efficiently, but labor is not. The operator generally sees to it that adequate fertilizer is used for he has a substantial stake in the crop: in the South 17 percent of the value of all fertilizer was used on cropper farms—49 percent more per acre of cropland harvested than on other farms.

Manpower Losses

From the standpoint of efficient utilization of manpower, the tenant farms are far from satisfactory. In 1939 about 37 percent of our farm manpower was on tenant farms; around 9 percent on cropper farms. Full-owner operators and their hired help represented 48 percent of the total manpower; part-owner farms, 13 percent; the remainder was on manager farms. Tenants with their 37 percent slice of the manpower, produced 32 percent of the value of all farm products, 26 percent of the livestock and 45 percent of the cash crops. Croppers, with 9 percent of the farm manpower, raised 9 percent of the field crops entering the market, but they produced for sale practically no dairy, meat, truck crops, and other farm products.

On the average, the value of products per person of the year-round farm labor force of all tenure groups was $728. In addition, farm operators contributed 209 million man-days to nonfarm jobs, and their sons and daughters undoubtedly made another big contribution. Because of the interchange of work between farms, and because no records are available on off-farm work by operators' families, efficiency of the several tenure groups cannot be measured precisely. But reasonably reliable over-all comparisons, with allowance made for off-farm work, indicate: $786 in income per person of the year-round labor force for all groups; $855, for the owner and manager group; $672, for the tenant group; and $353, on cropper units.

Croppers Again

Production per man-year for croppers is strikingly low. In considering the possibilities for a fuller utilization of manpower on cropper units, we should not look at the national average for owner farms as the goal. Rather the South alone should be viewed. In the 16 Southern States, the value of production (sold, used, or traded by farm households) per worker in the several tenure groups was: $463, for all tenure groups; $535, for the owner and manager group; $474, for the full owners; $382, for all tenants; and $337, for the cropper group.

Restrictions

That tenants do not produce equally with owner operators is not due altogether to their relative inefficiency. They have had to shift from farm to farm, from one community to another. They cannot be expected to operate unfamiliar farms as efficiently as owners operate theirs.

But far more important are the basic differences between farming as a tenant and farming as an owner. Tenants often are obliged to farm under restrictions prescribed by their leasing agreements. They must plant a substantial part of the land in specified cash crops. They are usually restricted in the acres put into food crops, especially forage crops, either by contract or in practice because a high cash rent is charged for any cropland that is not planted to specified cash crops. Frequently both permanent pasture and livestock are restricted. Furthermore, the usual short-duration leases prohibit adequate crop rotation and well-balanced crop-livestock enterprises.

Land Resources

Again, tenants do not have requisite land resources. In a few sections, tenants are farming the best land, but for the country as a whole, tenants have land that is valued at $35 per acre, while full owners have land valued at $40. In many sections, tenant farms are more depleted in fertility and are more eroded. The typical landlord-tenant arrangement does not provide for a workable means of maintaining fertility and preventing erosion. The improvements are more run-down. Driving through virtually any part of the country we see the obvious differences. Disregarding the fact that tenancy

Ingredients

Harmony and support of the weak by the strong is the secret of prosperity.

—Old Buddhist Saying

is concerned in areas where improvements on all farms are inadequate, it would take an increase of 67 percent per farm in the value of improvements on tenant farms to equal those on owner farms.

Even existing improvements are not being maintained. Here and there they have actually been razed. In 1939, only 14 percent of the funds expended for building materials were used for construction and upkeep on tenant farms. Moreover, there is not the machinery and equipment for full, efficient production. In 1940, they had less than one-third of the implements and machinery on farms.

If Released

Considering these handicaps, it cannot be said that tenants are not doing what they can to produce food for the war. These handicaps should be removed or modified for the sake of war food if for no other reason. The war problem on tenant farms is primarily a problem of kind and diversity of production.

As measured by the pace set by full owners, the national loss in production from the land and in the manpower on tenant farms is very substantial. It is too large to be ignored in our national programs. The picture of our tenancy system given by these new figures impels attention. Under war stimulus, these farms undoubtedly have overcome some of their underproduction. But the deep-rooted causes of the usual situation have not been affected. The fact that they interfere with maximizing wartime farm production converts the subject, always of social concern, squarely into a war question. And after the war, increased total production may be needed for rehabilitation abroad. Certainly we shall need a higher production per man to combat the low levels of nutrition that have prevailed on so many of our tenant farms here at home.

Language

Let us hope that in the future all school children in North America may learn Spanish and all pupils in Latin American schools may learn English, for language barriers are among the greatest obstacles to that understanding upon which the good neighbor spirit must depend.

—CHARLES J. BRAND

Thomas Jefferson AND THE PUBLIC DOMAIN

By EVERETT E. EDWARDS. *Perhaps nothing was more basic and more forward looking in connection with our country's development than Jefferson's attitude and action regarding the land.*

INCIDENT to the bicentennial recognitions of Thomas Jefferson's birth, much has been said and written concerning his many contributions to the Nation that he helped to create and direct on its course in world history. As a result, the measure of our country's debt to him has been appreciably lengthened, and the attempts to assay his multitudinous interests have brought the realization that they embraced practically all human knowledge as encompassed in his time. Considering the crucial role played by the public domain in American history, an epitome of his contributions in this field will perhaps enlarge the frame of reference for those concerned with land problems today and assist in completing a comprehensive view of Jefferson's achievements as a constructive statesman.

Jefferson adhered passionately to the democratic philosophy that he embodied in the Declaration of Independence. He saw the war against the Mother Country as more than a struggle for the recognition of the political independence of thirteen English colonies along the North Atlantic coast. Medievalism in all its forms had to be uprooted and destroyed if the destiny implied in the philosophy that he propounded was to be fulfilled. To Jefferson it was unreasonable to cast out monarchy and at the same time retain its trappings. To him the concept of democracy rested on equality of opportunity. To him the purpose of law was the protection of man not in his special privileges but in his social freedoms—freedom of conscience, of speech, of assembly, and of enterprise. Yet the law of Virginia as derived from the British crown and elaborated by a class-conscious aristocracy thwarted these freedoms.

Believing as Jefferson did, it was practically inevitable that he should hasten back to his native Virginia, once the Declaration was adopted, and give battle to the vestiges of medievalism there. By holding their lands in fee tail instead of fee simple and by devising them to the eldest son, the great families of Virginia had been able to retain and transmit their properties undivided and undiminished from generation to generation. This patrician order, to use Jefferson's own term, was a constant threat to self-government by free men for free men. To establish and perpetuate free government the economic basis of this self-perpetuating landed aristocracy had to be undermined, if not destroyed.

Accordingly on October 1776, Jefferson introduced a bill "To enable tenants in taille to convey their land in fee simple." Ably supported by George Wythe, George Mason, and James Madison the bill was passed but by a narrow margin. Jefferson and his supporters then turned to the revision of the entire legal code. The results, embodied in 126 bills, constituted the principles of the new democracy that was being evolved. One of the bills, drawn by Jefferson, abolished primogeniture and made real estate descendible to all the heirs.

Equality

By abolishing entail and primogeniture Virginia was emancipated from these vestiges of feudalism and its citizens were given a basis for equality of economic opportunity. The example encouraged the commonwealths similarly enmeshed to do likewise. It should also be emphasized that Virginia was the largest of the thirteen commonwealths and had vast stretches of unoccupied land within its immediate borders, including what is now West Virginia and Kentucky, as well as pretensions to enormous other territories west of the Alleghenies that ultimately became part of the public domain of the United States.

Basic

In addition to leadership in the achievement of democracy in land holding, Jefferson made notable contributions to the basic framework for governing and managing the public domain. In the critical period following the recognition of American independence, Jefferson joined the Congress of the Confederation as a delegate from Virginia and served on all important committees until he sailed for France to take Franklin's place as the American minister there. Among his state papers his report on the public domain, adopted with changes as the Ordinance of 1784, has been ranked by American historians in historical significance next to the Declaration of Independence. Except for its being superseded by the stronger Ordinance of 1787 it would rank among all American state papers next to the Constitution itself.

> ***Action***
>
> *Knowledge is not knowledge until it operates*
>
> —Mark Van Doren

Vital Principle

This report provided that the westward growth of the country was to be under the aegis of the Confederation rather than left to the individual States. It delineated the principle that the ultimate object of settlement west of the Alleghenies was new States comparable to those already in the Union. Two stages of preliminary self-government were outlined, and whenever any of the proposed States had as many free inhabitants as the least numerous of the original thirteen, it was to be admitted "on an equal footing with the said original states." There were also five proposals, constituting a compact, outlining the relationship of these States to the Federal Union, but the most important so far as the future was concerned—namely, that after 1800 "there shall be neither slavery nor involuntary servitude in any of the said States"—was defeated by only one vote. There still remained, however, the enunciation of the vital principle of federal union. The problem of empire that had shaken and ultimately broken the British Empire in the years immediately following 1763 was on its way toward solution so far as the American Republic was concerned.

Land Disposal

Jefferson was a member of the committee that drafted the initial procedures for disposal of the lands of the public domain. The draft of the committee's report submitted in 1784 is in his handwriting, but he had gone to France before the revised report was adopted as the Ordinance of 1785. As Jefferson's Ordinance of 1784 was the foundation of the American plan of colonization, so the Ordinance of 1785 embodied the fundamentals of the American land system.

Westward

It was Jefferson who grasped the significance of the vast uncharted lands to the west of the Mississippi River, then known as Louisiana, for the future of the United States. The rumor that weak and decadent Spain had retroceded New Orleans and Louisiana to France caused widespread alarm. The mouth of the Mississippi was the only practicable trade outlet for the pioneers on the western waters, and its possession by a powerful and aggressive France under the domination of the dictator Napoleon who had already mastered Europe was a dire threat. The possibility that Napoleon might reestablish a French empire in America, extending to British Canada and Spanish Mexico and ultimately perhaps the entire Western Hemisphere, boded no good for the young Republic headed by Jefferson.

Stirred

A measure of the extent to which he was stirred is indicated by the rapidity with which he modified the principle that he had enunciated as basic to his foreign policy. In his inaugural address on March 4, 1801, he eschewed "entangling alliances," but on April 18, 1802 he declared that "we must marry ourselves to the British fleet and nation," the moment Napoleon takes possession of New Orleans (and this is the germinal beginning of the Monroe Doctrine!). In October 1802 the Spanish intendant closed the Mississippi to navigation. This viola-

But—

All men desire peace, but very few desire those things that make for peace.

—Thomas à Kempis

tion of the right granted in 1795 further accentuated the clamor of the westerners for war and conquest, but they acquiesced in their leader's desire to try peaceful negotiation first.

Negotiation

Throughout the negotiations, Jefferson distinguished between wishes and reasonable possibilities, but in this instance wishes became actuality. He was unequivocably opposed to the reinstatement of France on any part of the North American continent. In January 1803, before James Monroe's appointment as special envoy to Paris, Jefferson requested $2,500 from Congress to send "an intelligent officer [his private secretary, Merriwether Lewis] with a party of 10 or 12 men to explore even to the Western Ocean and to bring back all possible information on the Indian tribes, the fauna and flora of the region." In February 1803 he wrote that "we bend our whole views to the purchase and settlement of the country on the Mississippi, from its mouth to its northern regions, that we may be able to present as strong a front on our western as on our eastern border, and plant on the Mississippi itself the means of its own defense."

Later the same year, he wrote with reference to the future: "When we shall be full on this side, we may lay off a range of States on the western bank from the head to the mouth, and so, range after range, advancing compactly as we multiply."

Forward

By ignoring "metaphysical subleties" Jefferson doubled the area of the United States, removed dire foreign menaces to its independence, secured the vital outlet to the vast inland waterway of the continent, and provided the basis for its becoming a world power. It was, as Jefferson himself said, a great achievement.

Taking the lead in abolishing entail and primogeniture in Virginia, Jefferson contributed greatly to the removal of the dead hand of medievalism from landed property in the United States, thus providing a basis for equality of economic opportunity. His federative principle for colonial government provided a workable solution for the problem of colonial empire. His acquisition of Louisiana provided space for the normal expansion and fruition of these and related tenets that he championed and helped preserve for later generations.

Master

A husbandman is the master of the earth, turning barrenness into fruitfulness, whereby all commonwealths are maintained and upheld. His labour giveth liberty to all vocations, arts, and trades to follow their several functions with peace and industrie.

—Gervase Markham

POST-WAR PLANNING has *No-Man's-Land*

By ARTHUR P. CHEW. *Key problems, says this observer, lie often in the overlaps between agriculture and industry, and should be attacked cooperatively*

PLANNING for the post-war years must naturally be both general and specific; it must draw a pattern for the economy as a whole, and must fill in numerous details. This requirement, though obvious, is especially difficult for agriculture. The difficulty arises partly from the overlaps, the no-man's land, the aspects of the job that concern everybody, and consequently don't appear to be anybody's business in particular. It can tend to concentrate agricultural planning on secondary matters, though without a framework into which such things can fit, and perhaps without a sufficient sense of the need for such a framework.

Examples of the overlaps are national employment policy, national price policy, the role of the Government in both domestic and foreign trade, and the outlook for international currencies and credit. Such things, which seem too big for any one interest to handle or even fully to understand, are nevertheless equally the concern of both industry and agriculture. This very fact, however, makes industry and agriculture doubt their jurisdictions so to speak, and inclines them to hold back where they should move in. What is not wholly their separate business, they often treat as if it were not their business at all. Sometimes they move in, but don't speak out, which is almost as bad.

Secondary matters may then take the foreground in post-war planning talks. It doesn't necessarily follow that the basic matters haven't been studied by the planners. Agricultural agencies have studied them deeply; but the obstacle remains as to who should pass on them. Subsidiary projects like rural public works, rural housing, rural medical care, and cognate projects, though of great importance, can advance successfully only if broader problems are in hand, so that farming generally can prosper. Yet because these broader problems are only partly agricultural, the agricultural voice on them is sometimes faint.

It doesn't speak loud, for example, with regard to the employment question; yet nothing can be of more importance to agriculture, or more involved with agricultural matters. The idea that employment is a problem exclusively for industry or for the government, with agriculture a mere watcher from the sidelines, cannot stand up.

Practically all economists declare frankly that if we don't plan for full employment, we shall not have it; they agree, too, that the employment planning must be agricultural as well as industrial. It must deal rigorously, for example, with possible back-to-the-land movements. Yet because the employment problem is superficially urban, agricultural people hesitate to discuss it. They look around for keep-off-the-grass signs.

Danger

Avoidance of the subject can be dangerous. It may cause farmers to think full employment is in the bag and may disincline them to face the problem realistically. It may encourage the delusion, moreover, that if we do have full employment, farm problems will be largely solved. Farmers had plenty of trouble after World War I, even in the industrial boom years. Agriculture has a tremendous interest also in how the Nation tackles its employment problems. Agriculture cannot fold its hands if we have a satisfactory volume of employment in the post-war years. Some ways of providing or creating jobs might not be to agriculture's liking. Agriculture should examine the question so as to influence the choice of procedures.

Everyone acknowledges, for instance, that the shift from wartime to peacetime employment will involve the Government. Most people hope the Government's role will be minor. They would like private enterprise to supply most of the necessary employment. But no one believes private enterprise will be immediately able to supply it all. There is virtual unanimity on that—on the proposition that for a time at any rate the Government will be a job provider to some extent.

Divergence

Only as to the proportions that should subsist between governmental and private action, do the viewpoints differ; but here the difference goes deep. One group would have the Government be extremely cautious and conservative, even at the risk of some delay in the economic pick-up; whereas another group would have the Government step in boldly at the first whisper of depression. Either policy would affect agriculture greatly though differently. Agriculture will not be in a position to choose wisely between them, if it leaves all employment planning to nonfarm groups.

Agricultural planning should include very careful analysis of the different employment possibilities, so that farmers may know at least the more important implications. Whatever the Government does, or refrains from doing, for industry and labor will have a bearing on agriculture. Any leaning, for example, toward a laissez-faire industrial policy, on the ground that industry should be allowed to feel its way a while and strive again to stand alone, might affect agriculture's ability to get commodity loans and price supports. It would not be reasonable to expect one kind of policy for urban folk and a totally different one for farmers. With industry and labor left to sink or swim, Government assistance for farmers would have hard sledding. On the other

Foresight

The future is purchased by the present.

—Samuel Johnson

hand, extensive Government help to industry would suggest a counterpart for agriculture, which might take the form of price support combined with price control. The price-control feature would arise from the Government's interest, as an indirect employer, in the worker's cost of living. Mere study of these questions is not enough. There should be widespread, active discussion.

Let's Collaborate

What the community decides about employment will have a bearing on other agricultural concerns, such as agricultural price policy and agricultural foreign trade. Employment policy, farm-price policy, and farm-export trade policy will take form not separately but together, in an all-embracing single program. Obviously, for example, the employment we have and the way we get it will influence consumer buying power, and consequently Government policy with regard to agricultural prices.

Broadly, we may say that the less employment we have, the greater will be the need and at the same time the poorer the chance for effective agricultural price support. Furthermore, the volume of employment will affect the need for crop controls. Experience has shown abundantly that price supports, except on a very low level, need the backing of limitations on production. This is a truism with regard to crops produced for export, and in times of unemployment applies to domestic-basis crops as well. Hence the employment problem is simultaneously the price problem and the foreign-trade problem. Agriculture has the right and duty to study all the branchings of it, even those that lead far from farming.

Three-Part Problem

Agriculture's planning should include all three legs of the tripod—employment, price-adjustment, and foreign policy. It shouldn't hesitate to enter no-man's land. Some aspects of our farm price plan lie there, mixed with national tariff matters. Our farm pricing method grew up under pressure toward economic nationalism whereas we are headed now toward freer and wider trade. Pre-war price controls, developed mainly as a response to foreign-trade depression, tended further to hamper exports. Loan rates lifted the prices of export staples far above world levels, so that export stocks piled up unsold. The moderate dumping to which we finally resorted was no true cure, as eventually we recognized ourselves in our advocacy of international commodity agreements. When victory provides the chance for freer trade, should we not be ready with a plan to seize it, a plan which can be fused with the Nation's total policy?

It won't be easy to sell cotton and wheat abroad at the current prices we have fixed for these commodities. Yet if we don't sell these and other commodities abroad, we shall have the surplus problem back again. And dumping will not be in good world repute. Working out the necessary price and trade readjustments, and the necessary international commodity agreements, should stand high among the post-war planning jobs. Unless we devise a better system, the one we had before the war may come back into play, and will close at least one door to an expanding farm economy. Agricultural economists know this well; but they haven't worked out a method for dealing with the overlaps—the phases of the problem that go beyond the farms. Manifestly, too, the task of devising a better program is not for economists only. Farmers must take part since the necessary ultimate decisions must come from them. Chiefly, it is the discussion feature of the planning job that lags, partly because it crosses lines of jurisdiction.

Jurisdiction

Priority in agricultural post-war planning should lie with the going-concern requirements of the agricultural industry, rather than with fears that the economy will break down. It should be positive rather than negative, and should study agriculture's gearing with the whole economy—in employment policy, in price policy, and in domestic and foreign trade. Agricultural analysts do not forget this fact. Agriculture can hold back from overlapping questions only at the risk of finding itself held to subsidiary matters, and simultaneously of being handicapped in that sphere too. Letting the big things slip out of agriculture's hands might mean letting smaller things also slip away.

True, the jurisdictional problem is very difficult. Certain matters that affect agriculture—such as currency and credit stabilization, and tariff policy—affect nonfarmers possibly more, and it might seem that by the rule of specialization nonfarmers should handle them. Yet these questions involve a hazard for farmers which they cannot overlook. Hence agricultural planning can succeed only if it ignores the rule of specialization, and deals with matters which many may regard as not its business.

To Integrate

Agricultural planning should go beyond agriculture for other reasons. Farm and other interests do not always coincide in the overlapping spheres. Agriculture's need of foreign trade, for example, may clash with industrial tariffs. Agriculture's determination not to be a dumping ground for unemployment may interfere with the desire of cities to lessen their relief expenses. Country and town don't see eye to eye on farm-price policy, and on the proper distribution of the national income. In such matters the agricultural interest should make itself known, and often should assert itself, so that general planning will not forget it.

Politically, the Nation has turned away from isolation. Our participation in the war means that. After the war the Nation may want to renounce economic and financial isolation. If so, the change will require definite planning. Agriculture's wartime program will lapse and will leave a vacuum unless we develop something to put in its place; and the fashioning of a substitute is too big a job to be done in agricultural isolation. It is impossible, for example, for agriculture to plan for abundance unless industry does likewise. In the face of industrial limitation, all-out farm production wouldn't have a chance. Planning for the kind of world we want involves agricultural and industrial planning jointly, through developing procedures to cross the jurisdiction lines.

Everyone knows the core of our dilemma. In peacetime, manufacturers and farmers reckon their welfare in terms of prices rather than in terms of production. They try to keep prices up by holding production down. Frequently, to be sure, they have no workable alternative. Unlimited production would not pay the costs, and producers would fail in droves. It has long been evident, nevertheless, that the restriction method runs into an impasse, because it curtails demand along with supply. Manufacturers lose their customers on the farms, and farmers lose their customers in the cities. Restriction may work if only manufacturers try it, at least for them; but if farmers try it too, it breaks down badly. Adopted simultaneously in both branches of the economic system, it simply changes a surplus of goods into an unused surplus of manpower, machinery, and land.

Temporarily, the war resolves this dilemma. The war gives every producer, in both town and country, a sale for all he can produce and send to market. But when the fighting stops the dilemma will return, unless we have a plan to head it off. Manufacturers and farmers may feel themselves obliged once more to rank prices above production, and the vicious circle of restriction will have us in its grip again. Above everything else, post-war planning should seek an alternative. Obviously, the alternative must embrace both fields and factories, since the essence of the dilemma lies in the fact that it results from reciprocal restriction. Somehow, industry and agriculture must discover how to help rather than to hurt one another. The nature of the problem shows it must be attacked cooperatively, through an advance from both sides into no-man's-land.

Earthen

The fabric of human life has been woven on earthen looms. It everywhere smells of the clay.

—J. H. Bradley

Books

TVA. Democracy on the March. By *DAVID E. LILIENTHAL.* Harper & Brothers Publishers. New York and London. 248 pages. (Bibliography.)

MUST either science or freedom be stifled to avoid social catastrophe? The finding of a satisfactory alternative to this question is *the* problem of the 20th century. We demand the new services and gadgets of science, yet hope for personal freedom and opportunity. Promotion of technology, primarily in physical terms, without regard to social consequences, leads directly to Fascism; while strict adherence to the social forms of the past, without regard to modern science, leads to Fascism also, but by the way of negation and frustration.

How can both technology and freedom expand? Peoples' faith in industry, in government, in science, and in themselves, depends upon the solution. To this problem Lilienthal has addressed his book—a progress report on a new experiment in democracy.

The experiment had this object: For the people of a region to use their renewable resources—like soil, water, and forests—to the limit of modern technology, on a sustained basis without waste, in the framework of a public interest that each individual helps define, within which he finds the maximum of freedom, opportunity, and responsibility, and from which he derives confidence in himself and in his fellow citizens.

The experiment was conducted in a region having great natural and human resources, only partly developed. Like all regions, it had its own combination of soil, water, forest, agricultural, and mineral resources; and its people had developed a unique pattern of skills, hopes, and ideas.

The material success of this experiment has been phenomenal, whether measured in terms of electric power, industry, flood control, agriculture, income per person, conservation, or any of the familiar criteria. Lilienthal gives the figures but he does not emphasize them. Rather he concentrates on the larger purpose of TVA, not as another agency of government to apply technology as an end in itself, but as a management system whereby the people can use all the facilities of government—National, State, and local—and their own talents, to achieve the good life for themselves as they want it and define it.

TVA has duplicated no other organization. Rather it has strengthened those already doing parts of the total job. The creation of local and State agencies, both public and private, has been urged wherever such organizations could take the responsibility or do the job as well as or better than TVA itself. This goes all the way along the line: local school boards and traveling libraries, State universities and conservation departments, and federal bureaus for research and public health—these and many more have greater strength and responsibility because of TVA. Moreover, as the policies in the valley are developed by people and for people, private industry, farm cooperatives, labor unions, and business associations are as important to the process as are agencies of government.

Lilienthal makes a convincing case for grass roots administration as opposed to centralization of management decisions in either New York or Washington. He shows clearly that authority and administration are separate ideas. TVA draws its power from centralized authority but the administration is decentralized to a degree unrealized before in large public or private undertakings. On the material side, the results are there for anyone to see: and the speed, effectiveness, and smoothness with which the Valley girded itself for war showed an unexcelled flexibility.

But of greater significance is the social or human side. In this system, the scientist or expert—in TVA or in any of the hundreds of cooperating groups—can do his work free from political or bureaucratic chains, on the one hand, and without dangerous grants of autocratic power on the other. So can the farmer, the business man, the politician, the school teacher, and the industrial worker.

Patiently yet firmly, Lilienthal warns his readers against false decentralization—against so-called decentralization through regional offices where the real decisions are made at the headquarters in Washington, Baltimore, New York, or other distant point—which is no decentralization at all. Such regional set-ups lack all the essentials that make TVA successful. These he lists:

> "—a Federal autonomous agency, with authority to make its decisions in the region
>
> —responsibility to deal with resources, as a unified whole, clearly fixed in the regional agency, not divided among several centralized federal agencies
>
> —a policy, fixed by law, that the Federal regional agency work co-operatively with and through local and State agencies."

Should there be more regional agencies, really decentralized according to these principles, in the author's view the problem of coordination through policy formation by the Congress and the Executive would be much less than the job of coordinating centralized agencies, working throughout the country along narrow functional lines, but with the divided authority that leads to both competition and buck-passing. More important, is the essential need for recognizing the local differences in resources, in people, and in the necessities of both. He summarizes: *"Decentralization frankly seeks to promote diversity; centralization requires uniformity and standardization."* [Author's italics.]

The compactness of the book defies abstracting—it is itself an abstract of the work, ideas, and results of thousands of people doing and thinking thousands of things together. It has the style of a sincere and busy man with much to tell that must be told accurately and simply, without passion or oversimplification. The result is a practical social document of far-reaching importance for all those everywhere who want to work—for "The dreamers with shovels (who) want only a job that is magnificent enough, room enough to stand in, and a chance to make a start. They see a start as only that. For this is a continuing process, this improving the physical environment of men. It is never finished. There is no end, no blueprint of a finished product."

With all the facts and figures, and patient explanations, this is a simple book, easy to understand. It requires only that the reader be able to work in the real world, where the slate is never quite clean, and have a touch of that higher virtue beyond tolerance—appreciation, appreciation for the ideas and help of the other fellow.

—*Charles E. Kellogg*

◆

MAN'S FOOD, ITS RHYME OR REASON. By *MARK GRAUBARD*. The Macmillan Company. New York. 213 pages.

BOOKS on food have so often been written by heavy-handed scientists or by light-minded faddists and recipe makers that the lay reader generally is inclined to shy away from new volumes on the subject. Even the dramatic story of the vitamins and their effect on ancient scourges like rickets, pellagra, and scurvy has too often been dull on the printed page. Dr. Graubard's book, therefore, is a pleasant surprise not only because much of it is such easy reading but also because it is an account of man's behavior and progress through the ages as expressed in his food. The book is unusual also because its author is a biochemist whose interest in nutrition came about through a study of the social, psychological and physical relationships in primitive man, and who has found in food a means of teaching tolerance and international understanding. Dr. Graubard's wide travel combined with his historical studies have given him a broader point of view toward food and its significance in war and peace than is found in most books on the subject. The chapters on meat, sugar, and spices are among the most readable.

The book gives the impression of hasty writing. It suffers from considerable repetition and frequently skims the surface of important subjects that would seem worthy of more discussion. No reference is given to the source of many quotations. The scientists, teachers, and extension workers who have been spreading the gospel of good nutrition for many years can hardly be cheered by the statement that the National Nutrition Conference called by President Roosevelt in May 1941 "constituted the first effort at awakening the American people to the realization that adequate food and sound eating habits should be the concern of the people themselves as well as of their government." The broad thesis of this book calls for more depth of treatment.

—*Helen Crouch Douglass*

GIVE US THIS DAY. By *CLARE LEIGHTON.* Reynal & Hitchcock. New York. 86 pages.

FOR MORE THAN a decade Clare Leighton has been known to America for her woodcuts. Living in the United States for about 8 years, this English author-artist now records in moving prose and graphic form her impressions of rural America. But her love of the earth and farm people has no geographical boundaries, for both text and illustrations have significance to people of all nations.

Give Us This Day is a saga of the earth. It sings of the eternal power of growth and productivity of the soil. From fields, prairies, valleys, orchards, and gardens man derives nourishment to create, to build a civilization, to shape the destiny of the world in which he lives.

Seen with the keen eyes of an artist and creatively expressed in poetic prose, the story traces production and distribution of basic food products from primitive processes, still practiced by poor farmers in certain areas today, to the mechanized methods of 20th century large-scale farming.

Across the vast American continent through a network of transportation are brought the products of the farm, uniting urban and rural dweller in a common bond. Each creates and is dependent upon the other. But without food man cannot exist. Hence the farmer plays the leading role in this great drama.

A series of imaginative scenes portray the farmer accepting servitude to the earth and his animals, courageously facing the inevitable struggle against natural elements, serene in the knowledge that he and his wife are the guardians of life since without their labor man must perish. His peace and happiness are not based on material things but spring from the fact that he is a creator, working with forces beyond the comprehension of mankind, and living in accordance with the rhythm of the seasons "he is secure in his own worth."

The book strikes a note of hope in a war-weary world, for across the surface of the earth the topsoil lies ready to receive the seed that man shall sow when war ceases. Frontiers have been swept away and America can no longer afford to neglect the precious life-giving elements of the soil. Responsibility for the survival of mankind rests on the broad shoulders of the farmer. The author gives us faith that he is equal to the task.

THE ILLUSTRATIONS (chalk drawings—reproduced by the gravure process) are a departure from Clare Leighton's superlative woodcuts. The textural qualities inherent in the medium itself impart a luminous sparkle, depth, and delicate tonal effect to the artist's work. Masses are lighter and greater areas of white are disclosed than in the woodcuts, but the direct simplicity of design and tender interpretation of rural scene and life are the same. Skillfully rendered with freedom and power, the drawings are especially well adapted to the text.

—*Mary La Follette*

Action for Cities: A Guide for Community Planning. Published under the sponsorship of the American Municipal Association, American Society of Planning Officials, and International City Managers' Association. Public Administration Service. No. 86. Chicago. 77 pages.

THIS GUIDEBOOK, the joint effort of three organizations, represents an orderly and lucid marshalling of steps necessary to effective community planning, explaining the planning procedure, discussing the planning method, suggesting in general what the plans should cover, and indicating the agencies now prepared to give technical aid and information to local planners.

Present-day concepts of city planning include more than considerations of physical lay-out. They encompass also the total economic and social life of the community, touching upon health, education, recreation, housing, air transport, and industrial and general commercial development.

The primary reason for this handbook is that, despite the shortage of technicians capable of directing planning programs, prompt action in city planning is imperative, and local planning bodies must carry on the work. In the absence of trained planning personnel, a compendium of this kind should prove an invaluable guide.

Of particular interest here is the attention devoted to problems of land use.

Instead of surrendering to the acceptance of existing conditions, the problem of land use should be approached from the viewpoint of what is needed.

It is necessary to study trends of changing land use and to interpret them by discovering which areas are free to change and which must be tentatively considered fixed because they are now being put to the use to which they are best adapted or because of natural limitations.

Once plans are made it is urged that something be done about them. "Plans that are left on the shelf to gather dust are of no benefit to the city and its people. Plans must be brought to action, and the program of action should be as comprehensive as the plans." Planning must be a continuous process, and plans should be laid for stated intervals, such as 6-year periods and 20-year periods. Now, too, plans should be laid for the war period and for the demobilization. Decisions must be reached as to the responsibilities to be undertaken by public and private community groups and agencies.

Other important considerations include tools for action—legislation, administrative arrangements, tax and revenue devices, public controls of development, and incentives to private action—and ways of financing a planning program.

Means of stimulating a continuing interest and activity are suggested. Plans for community development have been long in the making and relatively scarce in application, but the current accent on planning generally stimulates the hope that in the post-war years many plans made at the community level will be brought to reality.

—*Catherine C. Carmody*

MEET THE FARMERS. By *LADD HAYSTEAD.* G. P. Putnam's Sons. New York. 221 pages.

NO DOUBT there are many people on Manhattan Island who are ripe for some re-education in res rustica. Mr. Haystead has written a book for them.

Like a certain other veteran columnist, he seems to have been everywhere and seen everything. And his travels seem to have made him quite an iconoclast. He breaks idols with great abandon. Thus, there is no farm leader who can speak for "the farmers"; only a group of more or less regional Emcees, as the author labels his chapter devoted to Messrs. O'Neal, Goss, Patton, Babcock, et al. There isn't any typical farmer, nor any single farm problem—rather some 6 million of each. The best organs of information concerning the farm regions are the *New York Times, Christian Science Monitor, Wall Street Journal, Chicago Journal of Commerce*—perhaps modesty impelled him to omit Fortune Magazine. The self-appointed farm experts are sawdust effigies. The family-size farm is waning, realism being on the side of bigness and management (although much subsistence farming may well be retained).

Some of the Ozarkian chapter headings—"Come In An' Set"—"Look The Place Over"—stand up rather strangely amid the city-room sophistication of the text. But there is a chapter called "Nine Million Poor Relations" which makes the case for placing a lot of deserving people on small farms instead of on relief, and regardless of the heading it makes sense. In another headed "The Tool Shed" are lumped a miscellany of observations of farm politics, soil conservation, how to sell to the farm market, and the unsung contributions of city men to farm progress. The chapter which, like a sort of bucolic Duncan Hines, leads us on a national tour of farm dining rooms, unquestionably stirs both memory and appetite; also it tactfully reminds all urban cousins that the farmer still eats at the first table.

Despite its faintly cynical aroma, this book has enough flashes of understanding and shrewd insight to make you take it seriously. There isn't any sham about it. If the author flits three times over the continent in three paragraphs, nevertheless every mesa and barnyard is authentic. Sizing up certain modern changes in ways of doing things and in farmer viewpoint, it reaches interpretive breadth beyond the ordinary.

ALL IN ALL, Mr. Haystead has brought back to Manhattan a thoroughly individualistic report from the farm front. He doesn't hesitate to challenge some of the dogmas long accepted on the Potomac and on Sutter's Creek as well. One would think it more than likely that so clever a pen, having some day finished its mission of telling the Rotary Club what not to believe about the farmers, might write one of those rare books that really make you feel the good earth of America under your hand.

—*A. B. Genung*

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Universal

There is a maxim universally agreed upon in agriculture, that nothing must be done too late; and again, that everything must be done at its proper season; while there is a third precept which reminds us that opportunities lost can never be regained.

—Pliny the Elder

Land policy REVIEW

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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Contributors

Editorial Note: THIS FALL NUMBER supplies a varied reading. It looks a long way forward, it looks a long way back, it discusses problems in present undertakings. And it considers our neighbors to the North.

Henry C. Taylor, after serving agriculture in key positions around the world, is now director of the Farm Foundation with headquarters in Chicago. His article contains the gist of the final chapter of his book, World Trade in Agricultural Products, published by Macmillan, which was reviewed in last winter's number of this magazine.

M. L. Wilson has devoted his life to the larger phases of agriculture and rural improvement; he is now Director of Extension work.

Gordon L. Smith, agricultural expert, contributes this article through the Wartime Information Board of Canada.

Raphael Zon, Director of the Lake States Forest Experiment Station, writes that he has had more than 40 years of experience and observation in the Forest Service.

Helen L. Eddy is a very young but well-trained agricultural historian recently come to BAE.

R. N. Cunningham, forest economist, is located at the Lake States Forest Experiment Station, St. Paul Minnesota.

Margaret Jarman Hagood, social scientist, James G. Maddox, special assistant to the Chief, Donald C. Horton and A. B. Genung, agricultural economists, V. Webster Johnson, Head of Division of Land Economics, and Everett E. Edwards, agricultural historian, are all in BAE.

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World Social Structure–What Shall it Be?

By HENRY C. TAYLOR. *It may not be too soon to be thinking about the whole world-wide social structure in which we hope eventually to live and which we should like to leave for those who come after to perfect and maintain. Here the dean of rural economists meditates on the matter.*

THE SOCIAL structure is composed of all those institutions and agencies, public and private, which service and control the people of a geographic area or a sphere of interest. The world social structure is as yet but fragmentary. International law, international agreements, and the international agencies, private and governmental, carrying on or facilitating world trade are the fragments of what may become an effective world social structure. The International Institute of Agriculture, the World Court, and the League of Nations represent efforts to integrate a world social structure.

There is great need and, at present, great hope that in the post-war period the world social structure will be developed in a manner greatly to facilitate international relations of a political, economic, and social nature. This is necessary if world peace is to be realized.

The commerce of the world can best serve all the people of the world only when the world social structure has been developed to the point where the actions of any one nation will not run counter to the best interests of the world as a whole. Just as the professional groups, the industrial groups, the labor groups, or the agricultural groups within the nation should have autonomy so long as they keep within limits which promote the general welfare, so, under the controls of the world social structure, each nation should be free to run its affairs as it likes so long as it keeps in harmony with world welfare.

The view is held by many people in many nations that the major international conflicts and wars arise out of economic maladjustments resulting from the use by nations of artificial barriers to the international free flow of labor, capital, and goods. At a World Economic Conference at the League of Nations in 1927 the view was expressed that obstacles should be removed "with the twofold object of stimulating production and restoring free channels of trade." This, it was said, "requires concerted international action" specifically that it is essential "that nations should take steps forthwith to reverse or diminish those tariff barriers that gravely hamper trade."

International Trade

Another version of this point of view emphasizing the relation of trade barriers to international peace has been expressed in the following terms: The greater the economic significance of political frontiers, the greater the danger of war; and the greater the facility with which all nations may secure through commerce the basic necessities of national life, the greater the prospects of peace.

But there are those who have serious doubts as to whether the free flow of labor, capital, and goods would of itself guarantee peace and prosperity for the people of the world.

Economic Imperialism

The ambitions of Germany and Japan to establish industrial-commercial empires over vast agricultural countries outside their own political borders have been powerful influences leading to conflicts which are absorbing the energies of the world.

England has provided the student of economic and commercial history the classic example of industrial and commercial imperialization, but its trade was in a large measure with the recently colonized areas of the world and during the early colonial period the system was advantageous to the new countries because it enabled them to devote themselves to the development of rich natural resources. By the time Germany and Japan entered the commercial world as modern industrial nations, the colonization of the world had been practically completed and the time was already approaching for a change in the economic policies of England.

Does the development of industrial and commercial empires competing for food, raw materials, and markets, necessarily result in conflicts among these empires and between them and the countries from which they wish to draw food and raw materials and in which they wish to sell their products? Or can there be developed, in the face of manifest differences in efficiency and resources, a collective assurance that all the peoples of the world may have opportunities and rewards comparable to their skills and efforts without fear of exploitation or oppression? The answers to these questions will depend on the kind of world social structure the people have the wisdom, the will, and the skill to build.

What Next?

Will the conditions of peace at the close of the war be such as to make it desirable and possible to restore the world rubber market to the producers of southeastern Asia, or instead of depending upon this potentially perpetual source of supply, will it be thought more desirable to look to other sources? In considering this question, full account will be taken of the potential sources of natural rubber in tropical America.

Steps have already been taken by the Americas to stimulate the cultivated rubber industry in the tropics of the Western Hemisphere, where leaf disease and inadequate labor supplies have been major obstacles to its growth. It is to be hoped that a long-time point of view will be taken, that the welfare of all the peoples involved will be considered, and that any permanent shift from perpetual sources to temporary sources of rubber will be studied from every angle.

Similar questions arise with regard to silk. Will there again be an extensive world trade in raw silk? Will synthetic products continue to supplement or will they largely supplant silk?

What will be the role of technical progress in agriculture, industry and transportation in determining world trade in agricultural products? How important a role has world trade in agricultural products played in making possible the high standards of living of the people of northwestern Europe and the United States? Can these benefits be extended to the so-called backward nations? Do conflicts arise when outside capital undertakes the development of relatively undeveloped territory? Are skills, intellectual leadership, and organizing ability from "advanced nations" to be exported to "backward nations"? Is world uniformity in economic institutions to be desired?

Is it probable that the world social structure of the after-war period will provide for the continuation of geographical concentration of industry in a few nations dependent upon many other nations for markets, as well as for food and the raw materials of industry? Is it probable that many nations will be willing to serve as agricultural "hinterlands", and if so, can they, in this capacity, maintain their independence either economically or politically?

New Patterns

It is not to be expected that the pattern of world commerce in agricultural products can be or should be the same after the war as before. The character of the pattern will be influenced by the extent to which world commerce continues to be dominated by the highly industrialized nations and by the extent to which the agricultural surplus countries develop their own industries and by the extent to which the one hundred million farmers, or more, who have continued to produce primarily for home use, expand production for the world market.

A major change in world trade in agricultural products would result if each of the agricultural nations developed the processing and manufacturing industries in proportion to their agriculture. For example, the U. S. S. R., once called the granary of Europe, ceased to play an important role in world trade in agricultural products. Of course, the extent and character of the industrialization of a given agricultural nation will be influenced by the abundance or scarcity of all the natural resources including the metals and mineral fuels, and by the characteristics of the population and the availability of capital.

In Exchange

While the industrialization of the nations that are now exporting agricultural products in exchange for manufactured products would tend to reduce the amount of world trade in agricultural products, it might not affect the exchange of agricultural products for mineral products or the exchange of agricultural products between different climates.

Prerequisite

In fact, a change of this kind might well be accompanied by an increase in the international exchange of agricultural products owing to the modernizing of the agriculture and the industry of countries like India and China. Farmers in these countries would then more generally produce surpluses of the things they can produce to the best advantage to exchange for agricultural products grown in other climates and thus expand that part of world trade in agricultural products which arises out of variations in physical geography. The possibility for expansion of world trade in this direction is very great. A prerequisite, of course, is stable governments which are able to protect life and property and enforce contracts.

Furthermore, there is a growing realization that even in the period of greatest world prosperity a large proportion of the population of the world was undernourished. Nutritional studies are promoting the idea of greater use of the "protective foods." Progress in meeting these needs may wield a great influence on trade in food commodities.

Contrasts

Production primarily for the market characterizes the activity of fewer than one-sixth of the farmers of the world. A high proportion of the farmers of Europe, North America, and the South Temperate Zone produce primarily for the market. The farmers of the rural villages of eastern and southeastern Asia as a rule practice the self-sufficing economy. The farmers of the Orient produce but little for the market and buy but little in the market. The disadvantage of this self-sufficing economy is the fact that people have rarely, if ever, found it possible to attain a high economic standard of living on the basis of the limited variety of products available in any one locality. The low levels of living in the rural villages of India and China where commercial agriculture is but little developed give abundant evidence of the limitations set by the practice of local self-sufficiency.

Judicious Combinations

The relatively high level of living of the people on the family farms of the western world is based upon a combination of commercial agriculture and the production for home use. Over-emphasis of either is to be avoided. A farmer who gives primary attention to producing for home use will usually lack the funds for providing his children with a higher education. A farmer who overlooks the importance of producing for home use finds himself likewise limited because of the high cash outlay for food, much of which might be of better quality if produced at home.

Although farmers in the United States have the reputation of possessing a high standard of living, there are important exceptions. In fact, the lowest standards of living in rural America are not to be found in the Southern Appalachian Highlands where the self-sufficing economy is dominant. They are found in the areas of cotton production where a high proportion of the farmers grow cotton for market and produce almost nothing else.

In considering the modernizing of the agriculture of the so-called backward nations, full attention should be given to securing that combination of commercial and self-sufficing agriculture which will, in the long run, provide the best life for the people. This point cannot be too strongly urged for there has been a tendency on the part of those who have stimulated the development of large-scale commercial agriculture to think only of the ways and means of securing the products for the markets, with little regard to the building of a better rural civilization based upon a self-directing agriculture with a proper balance between production for home use and production for the market.

To Endure

Although commercial agriculture, added to production for home use, may be a means of building a civilization with more of the physical comforts and opportunities for education and culture, the question may be raised as to which type of rural civilization, the highly commercial or the largely self-sufficing, can the better endure the privations and disasters of centuries of international conflict. Clearly, the commercial nation with its great industries and its agricultural production for the market can build fighting equipment of a kind that the self-sufficing economy cannot produce.

On the other hand, the highly complex commercial economy is vulnerable at many points. Without its key centers, without its transportation system, the national life is paralyzed. The control of these may put the enemy in control of the nation.

Not so, where the civilization is based on a local economy in which people can live without great centers of commerce and without a transportation system. When it comes to perpetuating the race in a period of continued world upheaval, is it not possible that the self-sufficing farmers of southeast Asia will provide the seed for repopulating the earth if Western civilization should destroy itself with the machinery it has had the skill to construct, but lacked the wisdom and the will to control?

Life Itself

In the light of this problem of maintaining the race itself, should we not give first attention to the developmen of a world social-economic structure that will provide the conditions of world peace? This accomplished, the modernizing of the agriculture and the industry of the so-called backward nations may proceed with hope of success. Once there is assurance of responsible governments in a peaceful world, it may take little outside effort to modernize the agriculture and industry of countries which have for thousands of years followed the instincts for self-preservation by continuing to depend upon their self-sufficing economy and by avoiding dependence upon distant markets.

When these improvements in agriculture and industry are the result of, or at least associated with, an inner urge for a higher level of living in terms of food, clothing, educational facilities, and cultural opportunities, the people are on the high road of modern civilization.

Thirty Years of EXTENSION WORK

By M. L. WILSON. *To mark this anniversary year, the Director of Extension Work was asked to write about the underlying philosophy and principles and the future direction of the cooperative extension work.*

IN THE development of great social changes, historical mileposts are in themselves unimportant. One incident is linked to another. We find, for instance, a definite chain of events which traces from the agricultural revolution in England to the development of our modern agricultural technology. There were, first, such great scientific bodies as the American Philosophical Society, founded in 1743, and the Philadelphia Society for the Promotion of Agriculture in 1785. These set the pattern for the later county agricultural societies, such as the Albemarle Society whose inspiring organizer was Thomas Jefferson. There were the county fairs, the horticultural societies, the leadership of farm papers, the granges, and similar influences. All of these combined to bring about the founding of the United States Department of Agriculture, the establishment of the land-grant colleges and agricultural experiment stations, and the organization of the Federal-State-county cooperative Extension Service.

To be able to carry on scientific farming on a basis of personal initiative and without dictatorial or exploitative supervision, as the average farmer in the United States can today if he takes advantage of the opportunities offered him by the agricultural extension system, is indeed one of the greatest accomplishments of our free, democratic society.

It would be a mistake to think that this was brought about through a carefully thought-out plan, or even that the events we now see linked historically came about in logical sequences of a carefully thought-out agricultural policy. But we know or can be reasonably sure that most of the measures taken reflect a desire on the part of farmers through the successive generations to better their economic status. Farm people historically have been in search of the better life. And here in this country, where our kind of democracy was born, the desire of farm people was early reflected in the shaping of public policy.

No wonder, then, that agriculture early attracted leaders who, while they saw the power and possibilities of science, also saw the great need for coupling science with education if it was to benefit the masses.

Advancement in agricultural science alone could not have brought the tremendous economic achievement reflected in our present volume of wartime food production. Along with the new things in science, we needed new methods of education. Development of demonstration teaching, which is an underlying principle of agricultural and home economics extension work, is important. It is of as great significance in the entire field of education as it is in the more specific field of agricultural education. In the light of recorded USDA history it is too easy to think of men like Seaman Knapp, Charles A. True, W. S. Spillman, and C. B. Smith as outstanding agricultural leaders, rather than as pioneers in the development of education, but their contribution in the educational field was considerable.

Working Farmers

With the coming of the land-grant colleges and the organized efforts of the Department of Agriculture to reach the working farmers, agriculture probably made as rapid strides in the field of education as it did in the various fields of science. Both here and abroad, educators had been searching for new educational methods by which the families on the land could be induced to discard their suspicion of "book farming" in favor of trying more scientific methods. Through farmers' institutes, through bulletins and publications, and through the farm press, the more alert and ambitious farmers were able to take advantage of the scientific knowledge unfolding in our research institutions. Out of these efforts grew what by the turn of the century became known as agricultural extension work.

Departments of agricultural extension had been created at several agricultural colleges in the 1890's. By 1907, 39 State agricultural colleges were carrying on some form of extension work. In Iowa, one of the first States to carry on organized work of this kind, Uncle Henry Wallace of *Wallace's Farmer,* the grandfather of our Vice President, was one of the chief promoters of the State's first extension act. E. R. Wannop, in charge of extension work in Scotland, told us on his recent trip to the United States, that extension work in Scotland got under way on an organized basis in 1905 and was in full swing by 1908.

Coincidences

But extension work as we know it today, relying to a considerable extent on the persuasive power of demonstration, came as the result of threatened failure in a private venture on the part of a former educator. The story of Seaman Knapp and how he hit upon the idea of "community demonstration farming" has been told repeatedly. That this development came just in time to prevent farmers in the South from throwing up their hands during the cotton boll-weevil panic which swept the Southland in 1903 and 1904 is also widely known. A point which has not been emphasized enough, perhaps, is that the coincidences of necessity, associations, and friendship sometimes play an influential part in finding solutions to great problems.

Back in Iowa, Seaman Knapp and the man who was to be Secretary Wilson—"Tama Jim"—were great friends. Knapp left Iowa long before Wilson became Secretary of Agriculture. Knapp's inception of demonstration teaching was primarily a Southern development. When the cotton boll-weevil emergency hit, it was chiefly through Secretary Wilson's friendship for Knapp that, out of an emergency appropriation of $250,000 to combat the weevil, passed in January 1904, $27,000 was allotted to permit Knapp to launch "Farmers' Cooperative Demonstrations."

In this emergency use of funds lay the germ of what was later to become the chief instrument of organizing our modern farm technology. The experiences of Dr. Knapp, with the full endorsement of the General Education Board of New York, coupled with the genius of such outstanding men in the Department of Agriculture as Dr. True, Dr. Allen, and Dr. C. B. Smith, actually laid the foundation for the later organization of extension work on the Federal-State-county cooperative basis on which it has operated for 30 years, under the provisions of the Smith-Lever Act signed by President Wilson on May 8, 1914.

Educational Principles

In these 30 years we have learned that, although agricultural and home demonstrations constitute perhaps the keystone of the extension system, many other things are a part of extension work and successful extension teaching. The following principles of education may now be said in a general way to be embodied in extension programs:

(1) *Participation.*—Interesting farmers or members of their families in acting either as project demonstrators or cooperators, or as local or neighborhood leaders.

(2) *Democratic Use of Applied Science.*—Translation of scientific research and experimental findings in such a way that farm people can adapt them or reject them, according to their own wishes and needs.

(3) *Cooperation.* — Cooperating educationally and otherwise with the three levels of government—Federal, State, and county—and with local groups and organizations.

(4) *Grass-roots organization.*—Sponsorship of local programs by local groups of rural people in cooperation with the resident agent representing the Extension Service. Extension work reaches into the community, neighborhood, and family, with projects for every member including boys and girls 10 years old or over.

(5) *Variation of methods according to needs of groups.*—Development of a variety of teaching methods with which to reach different groups in a community.

Coming Again

The staircase of history resounds to the noise of the wooden shoe of the peasant ascending.

—Thomas Carlyle

(6) *Use of specialists.*—Reliance on trained specialists who have the responsibility of keeping resident county agents in close touch with experimental research and progressive developments in better farm practice.

(7) *Survey and trial programs.*—Scientific sampling and surveying of limited programs to test their practical use on a larger scale.

(8) *Recognition of interests and needs.*—Building programs in accordance with the needs and interests of the families to be served.

(9) *Recognition of cultural differences.*—Adapting programs so as to be best suited to the culture of the people who are to be taught.

(10) *Recognition of cultural changes.*—Adjusting programs in line with scientific developments as these are accepted by the community; and with changes in conditions and requirements expected of the community.

Records show that each year the Extension Service is reaching a greater number of people in rural areas. We cannot, however, measure in statistical terms all that extension work has accomplished as an educational institution since the turn of the century.

Great Changes

Some of the things extension work has done and is doing are probably not widely enough recognized. That may be true in the field of agriculture as well as in the Nation as a whole. Great changes have taken place as a result of scientific progress. These changes have left their mark on human society. Among rural people, they have meant a tremendous evolution in living standards. Given post-war freedom from economic depression which might result from Nation-wide industrial unemployment, farm people will realize a higher standard of living than has ever been enjoyed by any rural population—speaking in terms of the mass—in the history of mankind.

Flexibility

We have seen a shift in emphasis during recent years from the individual approach in extension work to the group approach. Witness, for instance, the activities in 4–H Club work. We see here a social trend that is highly desirable in terms of the time in which we live. Persons engaged in group activities become acquainted with other, like-minded individuals. So long as the activities follow the course inspired by extension work such group activity is bound to mean social betterment. Learning to work in groups to get jobs done signifies a development in the mass life and quality of human beings.

Throughout its 30 years of operation, extension work has had a high degree of flexibility in adapting itself to the needs and problems of local people. The work was begun primarily to help farmers help themselves in the realization of their practical needs. But the scope of the programs and approaches essential to achieve such an end have necessarily been so broad that agricultural and home economics extension work in the United States is now recognized the world over as a force that plays an important part in shaping the cultural directions, material progress, and the personal destiny of millions of our rural people.

CANADA'S FARMERS *Look to the Future*

By GORDON L. SMITH. *Some of the chief changes in Canadian agriculture brought by the war are likely to continue into peacetimes, says this Canadian agricultural expert.*

WITHOUT at least a peek at the British Empire and world commercial treaties that will follow the making of the peace it would be a rash prophet who would attempt to state definitely the trends of Canadian agricultural production after the war. Canadian farmers are so dependent on a huge export trade in certain major lines that they must conform to a production pattern over which they have by no means complete control.

All that one can safely predict at this time is what may happen provided world trade conditions bear some general resemblance to the situation prevailing before 1939. We shall assume that most nations will again be able and willing to buy each other's goods and that the general trend towards freer world trading which began to develop around 1935 is continued and accelerated.

Since the opening of the Canadian northwest (1905–15) wheat has been the dominant farm export of Canada and by far the most valuable farm crop as well. The normal harvest runs around 350 million bushels, of which two-thirds is exported. Far behind but of major pre-war importance were exports of pork products, particularly specialized long lean bacon, live beef cattle, and cheese. Speaking very broadly, all the wheat, the bulk of the beef cattle, and a few hogs were raised in the three prairie provinces of western Canada; all other exports, save some apples from British Columbia originated in Ontario and eastward. Farmers in the eastern provinces were mainly interested in the domestic market, whereas western farmers were mainly interested in exports. That was the situation at the beginning of this war.

At first, anticipating that war markets would follow the general pattern of the great conflict of 25 years before, when Canadian wheat acreage was doubled, Canadian farmers in 1940 sharply expanded the seeding of wheat but only moderately increased other lines of production. But exports demand did not develop correspondingly; in fact, enquiry for wheat fell sharply. With practically all Europe cut off by Hitler's armies, enquiry for wheat actually decreased and soon Canada found itself with an accumulation of more than half a billion bushels, or enough to supply normal export for more than 2 full years. On the other hand the overrunning of Denmark by the Nazis cut off one of Britain's major sources of bacon, dairy, poultry products—a situation that was further aggravated by Japanese conquests in the Far East which shut off supplies of vegetable oils.

By 1941 it was evident that Canadian farmers would have to revise farm production drastically if agriculture in the Dominion was to play its full war role. The British market, always the most important outlet for Canadian farmers, had completely changed under the stress of siege. A lot of wheat and flour was still required, but with a half-billion bushel carryover and good crops looming there was no anxiety about this, except the storage problem. But there was much anxiety concerning supplies of highly concentrated foods like meat, fats, eggs, cheese, and condensed milk. Denmark had formerly supplied a good deal of these and New Zealand and Australia were big factors too. Denmark was cut off, and shipping was too scarce to bring produce from the other distant Dominions.

Present Picture

Backed by long-term contracts and various subsidies and bonuses, Canadian production of bacon, cheese, milk, butter, and beef was stimulated, and by strict limitation of deliveries and by price subsidies on competitive grain used for livestock feeding, wheat acreage was discouraged. As a result we find in this fifth year of the war, Canadian production of hogs far above peacetime records, big expansion in the output of dairy and poultry products, a tremendous growth of 'mixed' farming, especially hog farming in western Canada, and wheat acreage—until the gradual lifting of restricting influences this year—down to the levels of about 25 years ago.

How permanent will these changes prove to be?

Clues to Future

The changes in wheat picture this year probably offer a significant clue. At the time of writing no official estimates of farmers' intentions to plant are yet available but it is certain that acreage of wheat was stepped up substantially last spring, probably as much as 20 or 25 percent.

Several factors are responsible. In the first place there has been a recent sharp increase in exports to Great Britain, to that part of Europe and Africa that is already liberated, and to the United States. As a result, official restrictive influences have been greatly modified—in fact practically eliminated—for the time being at least.

Weather has been another potent factor. The spring was early and dry, favoring the seeding of wheat which farmers are convinced is a surer crop under these conditions than the coarse grains.

But the greatest reason of all is the conviction of the majority of Canadians, farmers and townsmen

First

In order to master Nature we must first obey her.

—Francis Bacon

alike, that immediately after the war there is going to be a tremendous demand for wheat. Already they see that demand developing and our carryover shrinking fast.

Changes of War

It is hard to make an exact estimate of the increase in farm production in Canada since the war began, but a Dominion Department of Agriculture economist said recently that it now exceeds by more than 50 percent the annual volume of pre-war years. In this increased production Canadian farmers have been guided by objectives determined at annual dominion-provincial agricultural conferences. Official objectives have been set which would increase all the stated products over the 5-year average, except wheat. In some cases these objectives have been reached or exceeded and in others they have not. There is no ready yardstick for balancing such diverse products as hogs, butter, wheat, and milk, even if the all-important factor of weather could be disregarded. Canadian farmers have cut down wheat acreage but made up the difference in coarse grains and hay. They have doubled their output of hogs, stepped up total milk production about 25 percent, are raising considerably more beef cattle and some more sheep, and have sent the egg output soaring. Moreover Canadian farmers have accomplished all this with a reduction of more than a quarter in available labor and with continuing, though easing, shortages of farm machinery.

With Great Britain, Canada has a 2-year bacon contract from January 1944, calling for a minimum annual export of 450 million pounds; at the present rate of export it may be filled twice over in this year alone. This is about four times the best pre-war export. There is also a guaranteed market for most of Canada's cheese and eggs. By decreasing the domestic ration Canada has been able to export a little butter, and is sending over considerable quantities of condensed milk. Flour and wheat exports have continued and are large, but these have always been important, war or no war.

Record Home Demand

In addition to these war exports to Britain, Canadian farmers have been handling a record domestic demand, and one that on several occasions has threatened to get out of hand. Under the influence of more than a million new jobs, in the army or war plants, domestic food consumption has risen sharply. Use of meat and butter would have soared had it not been for rationing. Even with that device consumption is very high and consumption of fluid milk has risen steadily in every urban center of Canada.

Always Wheat

Wheat has always been a natural crop in great areas of the central northwest. Quality has been amongst the world's highest. It has proved one of the safest and easily the most profitable of crops. Production lends itself to large-scale operation and the use of modern machinery. On the other hand dairying and other livestock raising, because of the danger of drought, has never been very popular in the heart of the Wheat Belt. Judging by the prompt switch back to wheat this year, farmers in these areas of western Canada are going back into heavier production of that cereal and will continue to do so as long as export markets can be obtained. Canada has the land and the handling facilities for an annual crop of 350 to 450 million bushels of high-class hard spring wheat. The domestic market will use for flour, feed, and seed about 150 millions, the United Kingdom will take about the same quantity; the rest must find a market elsewhere.

Diversification

But more wheat alone is not expected to end the problem of postwar markets. Fringing the straight wheat areas in western Canada and especially in much of Alberta and Manitoba there are large sections of land in which moisture and running water are more plentiful. Here wheat does not do so well but oats, hay, and pasture and other fodder crops in normal years yield abundantly. This is good country for hogs, beef, and dairy cattle, and here has been the great wartime expansion of mixed farming. Farmers in these areas, with abundance of local cheap grain, are convinced that they can produce bacon, butter, and eggs as cheaply and perhaps more so than can be done in eastern Canada. Admittedly the bacon from the hogs they have been raising in greatly increased numbers since 1939, is not yet of the high uniform quality of pre-war Danish, Canada's principal pre-war competitor; but it is good and can be improved.

In beef cattle there does not seem to be so much to worry about. Farmers, remembering the market debacle after the first Great War, have been cautious in their expansion. A fair sized export market is essential but they think they have this in their pre-war live cattle export quota at a reduced duty to the United States and an alternative secondary market for live cattle in Great Britain. These outlets and a fair domestic demand could handle the recent expansion. On July 14, Agricultural Minister Gardiner announced that negotiations had been completed for a contract to supply the United Kingdom with a minimum of 100,000,000 pounds of beef during the 2-year period, 1944–45.

Best

No one management practice is more important to all crops in all areas than getting work done at just the right time.

—BAE

In egg production the authorities have already warned against further expansion and pointed out that some contraction seems inevitable.

Dairying is definitely not in this class. The cheese export to Great Britain has been expanded to replace the cheese that Britain used to get from Denmark and New Zealand. Before the war, however, most Canadian dairymen regarded the cheese end of their business as sort of a poor relation, and only through subsidies, withdrawal of supplies from the domestic market, and other pressure was the present export boost maintained. After the war many farmers will be willing to switch back to butter factories and the whole-milk trade for the domestic market.

Potent Adjustors

For smoothing readjustment of agriculture from war to peace three potent factors are seen. First and most important is the near certainty of firm world food markets for 1 to 2 years after the end of the war. This will provide an opportunity for orderly liquidation of herds, flocks, and crops down to peacetime levels, if farmers want that opportunity. Of course, without some control, it may also be the basis of the biggest farm boom the world has ever seen. But that chance must be faced.

Secondly, and on bacon, the product where a post-war crisis threatens most, there is the present 2-year contract. This may bridge well into the peace and it will certainly do so if present efforts of the Dominion Government for a 2-year extension are successful. That again would provide for orderly liquidation of foundation stocks, if farmers want and think such liquidation is wise.

Finally there is the present complicated official system of farm subsidies, bonuses, price supports, etc., on war-expanded lines. They give the authorities some control over production.

Summing up then, one can state definitely that this war has resulted in an almost amazing growth of mixed farming in the more suitable areas of western Canada, that it has given Canadian farmers a chance to supply Great Britain with 80 to 85 percent of its bacon requirements and more dairy products than in peacetimes, at the same time keeping up a big steady flow of flour and wheat. Speaking less definitely, one can predict that Canadian farmers expect to retain permanently a substantial part of this wartime gain.

War of Ideas

The war of arms may end in 1944 or 1945. I do not know when. But the war of ideas will certainly go on—the war to decide what kind of ideas are to govern the world.

—Sir Gerald Campbell

TOWARD FULLER Use OF All Land

By RAPHAEL ZON. *A forester envisages an expanding rural civilization based not on commercial agriculture alone but on full utilization of all land resources.*

IN THE DISCUSSIONS of post-war planning, the need of an expanded economy is often emphasized. Yet much of the concrete post-war thinking reflects a philosophy of scarcity or fear of competition. This is true not only of business and labor but also of agriculture. Apparently each attempts to hold its own advantages and keep the control over production in its own hands.

The post-war problems in agriculture cannot be isolated from the post-war problems in the rest of our economy. For the most part, these are the same problems that plagued us before the war. After the war the pressure for solving them will become more insistent because of the heightened sense of community responsibility to our fighting men and the need of readjusting our economy from war to peace.

It is not to be expected that agriculture can or should shoulder the greater part of the responsibility of creating opportunities for ex-servicemen and workers released from war plants. This responsibility must be shared equally by all the economic groups—agriculture, industry, and labor. All of them have a common interest and a common goal.

This goal, first of all, is to maintain our national income at the same level as it has been during the war. This is the most essential condition for full employment. Should the national income fall, say, to 100 billion dollars per year, agriculture's net income would fall from the 1943 level of some 12 billion to 7 billion dollars. Such a reduced national income would not only preclude the possibility of providing security on the land for the million farm war veterans, but would even leave about a million members of the existing families and some 500,000 farm laborers unemployed and with no place to go. Unless we approach the post-war problems with a strong determination to maintain and possibly even expand our present national income we are licked before we start.

In agriculture the philosophy of scarcity is reflected in the oft-repeated argument that there are already enough farmers to take care of all our needs, that most of the good land is already gone, that future markets for farm products both at home and abroad are uncertain, that technological trends are toward increasing the productivity of farm labor and consequently toward decreasing the number of farmers.

From the standpoint of the large commercial farmers—the 50 percent who produce 90 percent of all the agricultural products entering the markets—this viewpoint is understandable. From the standpoint of the other 50 percent of the farmers, or from that of the returning servicemen and demobilized war-plant workers, this attitude leaves much to be desired.

Sound Settlement

Traditionally, after each war plans have emerged for settling returning soldiers on the land. Most of these plans, especially after the last World War, proved unsuccessful. If land settlement of veterans is attempted after this war we should at least avoid a repetition of the mistakes of the past. There should be no helter-skelter settlement in remote regions away from existing social and recreational facilities. New land settlement should not be developed simply as a haven for the unemployed. No farm communities should be established upon the theory that they will be supported permanently by public works. No farm community should be established on a subsistence basis with the idea that the farmer will eke out his livelihood partly by working on a submarginal farm and partly by working in some local industry.

Settlements should be made on good land that has not been inflated in value, and the farms should be of sufficient size to provide reasonably good incomes. An individual farmer on a little piece of land struggling to make a living through his individual efforts is foredoomed to failure.

On the other hand, with farms on land leased from the Federal Government, from States or counties, with no mortgages facing the settlers, with machinery bought cooperatively and with cooperative marketing of products and perhaps, with a chance at part-time work in the woods, mills, or other industry, a new chapter might be written in the agricultural development of the country.

Drought

It's a pity fair weather should do any harm.

—Scottish Saying

Not Only Farming

In general, too much stress is being laid on land settlement for agricultural production as the sole source of income from land. Using the land for agriculture is often only a partial and in some areas not the most advantageous opportunity for rural people to make a living. The main task is to create economic opportunities on the land. It means improved opportunities for the people who are already on the land and the creation of new opportunities through fuller utilization of all available land resources.

We must not overlook that only one-fourth of our land is cropland. On the other hand, one-third of our total area, or 630 million acres, is forest land. The ratio of forests to the total area in individual States ranges from less than 2 percent to more than 75 percent. About one-fifth is natural range land. Mineral lands, waters, bogs, etc., make up the rest. This non-cropland, embracing forest, range, marsh, and water, is an economic empire in itself. Many people can make a living on the land provided the resource is fully developed and properly handled.

Other Potentialities

In the case of forest land the opportunities lie not merely in the protection, growing, and harvesting of timber crops—important as they may be—but also in the fishing, hunting, and recreational industry based on the forest, and in numerous industries operated by water power developed from forest watersheds. It was estimated in 1936 that the equivalent of 3 months' work for 15 million men came directly and indirectly from forest resources. The potentialities of such work barely have been scratched. When fully developed on a permanent basis, the forest resources should support the equivalent of 25 million men for 3 months.

Range potentialities likewise are great. Western ranges now carry about 17 million head of livestock, and when restored to full capacity should support about 23 million head. Vast deposits of coal, iron, oil, and other metals and minerals are other sources of permanent work based upon land.

Broader Perspective

Even the agricultural potentialities of the country are not yet completely developed on a permanent basis. It is said that to meet the nutritional needs of all the people it will be necessary to maintain in cultivation all the land that was being cultivated in the summer of 1944, or the equivalent of this acreage. Those who are now farming include many older men who would like to retire and many who have been temporarily pressed into food production through patriotic motives. Moreover, some land is being used that would not otherwise be in cultivation. When the winning of the war allows these groups to withdraw from farming, and many of the established farms return to their usual acreage of production, there will be room for new and returned farmers to take part in providing the food that the world will need.

Land resources viewed in this broader perspective should offer productive employment to millions of discharged servicemen and demobilized war workers, in the course of time. These opportunities may not exist in purely commercial agriculture or in full-time lumbering or mining, but may involve a combination of enterprises suitable to the particular resources at hand.

Example: The "Cut-Over"

To take a specific case: The so-called cut-over region of the northern Lake States comprises some 57 million acres. Of these, 45 million acres are still classed as forest land. This forest area is almost the same size as that of Sweden or of Finland, and almost two and a half times as large as the forest area of Norway. Much of this forest, it is true, is of low quality and is poorly stocked. Still, there are some 2½ million acres of virgin timber. The region is the center of the northern hardwoods industry, is one of the large producers of paper, and has the largest number of pulp and paper plants.

The region accounts for 85 percent of all the iron ore mined in the United States. According to a recent soil classification some 18 million acres of land are suitable for agriculture, of which only one-third is actually in farms. The region abounds in lakes, streams, fish and game, and supports a recreational industry which in magnitude is next to New England and California.

Let Us Assume

It is a fairly established fact that from 50 to 100 acres of forest land, depending upon the intensity of management, provides permanent work for one man for a year. We cannot expect at present such intensive timber culture in this country. But let us assume that if we adopt some semblance of permanent forestry 1,000 acres would give work to one person per year. The 45 million acres of forest land would immediately provide permanent work to some 45,000 persons in addition to the 54,000 people already gainfully employed in the woods, mills, and pulp and paper plants.

Take the mining industry of the region. Millions of tons of ore are shipped out to be smelted in Pittsburgh or Cleveland. Suppose most of this ore were partially processed or beneficiated at the mouth of the mine, as is done in England. What new opportunities would be created for local rural labor although to be sure it would mean reduced employment elsewhere.

The forest potentialities of the region are only scantily developed. Its available raw materials could support many small forest industries, for the products of which there is a decided need. Today the cut-over region barely supports 1½ million people. Before the war from one-fourth to one-third of this population was on relief of some sort so the population directly supported by the available resources probably did not actually exceed a million.

Finland and Norway are only one-third larger than this region, yet they have a population close to 3 millions each. Sweden, which is not quite twice as large, has a population in excess of 6 million. These three Scandinavian countries, climatically and from the standpoint of natural resources, are closely akin to the northern Lake States.

Why Not?

It is only reasonable to assume that the cut-over region could also support a corresponding density of population of, say, from 2 to 2½ million, and on a much higher level of living than most of them now enjoy, if the land, forests, mines, and waters are developed and fully utilized, principally for the benefit of the people living there.

This is only one example, and not the most promising, of many similar areas throughout the country.

Making the Most

Our land resources—whether cropland, forests, range, or mineral land—are not the rich, virgin resources of a century ago. They will need careful handling if they are to meet the Nation's requirements to the fullest extent. Many farm lands have suffered from overcropping and erosion. Forests have been severely cut and burned. Ranges have been seriously overgrazed. Our highest grade ores have been depleted.

Nevertheless much of the damage may yet be repaired by intelligent land management. Where such restoration promises definite results within a reasonable time, and where the public need is clear, a program of public works may well be undertaken. If properly planned on a long-term basis, such works will fit well into the program of rural resettlement, supplying temporary employment until the resources themselves can support the community.

It has been estimated that 3 million people could be provided with worth-while work on a full- or part-time basis designed to protect land, water, and forest resources. Some 1½ million workers could be provided with part-time employment on reforestation alone in the next 10 years.

A vast rural housing program is needed. The farmhouse survey showed that 3 million farm dwellings in the United States failed to meet the minimum requirements for health and comfort. An expenditure of a billion dollars a year is not unreasonable for construction and repair to provide good housing on farms. New rural enterprises should be encouraged, such as small farm-machinery units and new industrial uses for farm waste.

Foundation

"Settlement on land" must be based upon real opportunities to work and establish permanent homes. The returning veteran will not be satisfied with a bonus, no matter how generous, with "made" work, or stop-gap jobs. He will want "to belong" and be integrated in the civilian body, and be a useful citizen with permanent roots in the community where he chooses to live. To meet these conditions will require careful planning, intelligent investment of public funds, and honest and generous implementation.

There is something incongruous, therefore, in a policy that discourages rural living, especially in a young country like ours which still has vast undeveloped land resources and when the social problems of urban and industrial life are proving so difficult. Land is the great reservoir of our strength as a Nation. It is the foundation upon which an expanding economy can be built. Like the legendary giant, Antaeus, whose strength was renewed every time he touched the earth, so also our strength must come from the fullest use of all the land.

Keeping at It

If you have great talents industry will improve them; if you have but moderate abilities, industry will supply their deficiencies.

—Sir Joshua Reynolds

Thomas Jefferson's LAND PRACTICES

By HELEN L. EDDY. *As a part of the celebration of the Jefferson bicentennial this magazine carried in its preceding number an article on Jefferson's land policies. It now reviews his actual land practices which were far ahead of his day.*

IT IS well known that many of those who have made major contributions to the creation and development of our Nation were close to the land and intimately acquainted with farming problems. This was especially true in colonial days when farming was the main occupation. Colonial Virginia was predominantly agricultural and the main body of its citizens were large landowners. Although many of these men practiced a profession such as law, medicine, or surveying, or served as members of the governing bodies, much of their time was devoted to the management of their estates, which furnished their chief source of income. Outstanding among this group of Virginia planters was young Thomas Jefferson.

Because of the early death of his father, as soon as Jefferson became 21 he was responsible for the management of the estates for the whole family. In addition, he continued to study law under George Wythe, one of the most eminent legal minds of his generation, and was admitted to the bar of Virginia in 1767. Two years later he became a member of the House of Burgesses representing the district of Shadwell. Thus far Jefferson was the typical young Virginia planter, supervising his estates, practicing law, and engaging in political activity—but here the similarity ends. Jefferson's love of nature coupled with his scientific bent and his training at the College of William and Mary, caused him to regard farming as more than an occupation or a source of income—to him it became a field for experimentation and a valued way of living.

His own estate through inheritance, marriage, and purchase comprised more than 10 thousand acres. About half that acreage was located in Albemarle County where he had five large farms—Shadwell, the birthplace, Lego, Pantops, Tufton, and Monticello his own home. The land was rolling clay loam with the best portions along the Rivanna River. Most of Monticello was too steep for cultivation and he wisely left the wooded mountain slopes in their natural state. He leveled the top of the mountain for his lawn and gardens and terraced the upper slope facing the south to use as an orchard and vineyard.

During the Revolution and the decade following, Jefferson's public services left no time for the personal management of his farms. But his love of farming was deep-seated and not a youthful enthusiasm. He constantly gathered information about crops and implements he thought might further the agricultural activities of others in the United States. He explained his viewpoint to William Drayton in 1786, saying, "We are probably far from possessing as yet, all the articles of culture for which nature has fitted our country. To find these out, will require abundance of unsuccessful experiments. But if, in a multitude of these, we make one useful acquisition, it repays our trouble." Consequently he went to great pains to secure plants and seeds as well as agricultural pamphlets to forward to his friends.

Soil Exhaustion

His long absences from home forced him to rely upon overseer management with the usual results of reduced crop yields, soil deterioration, and erosion. The farm economy of colonial Virginia called for continuous cropping of corn and tobacco—corn to feed to stock and servants, and tobacco for cash—until the soil was exhausted. Then new fields were cleared, the old abandoned, and the same planting system employed as before. To add to the general havoc the plowing was done up-and-down slope thus increasing the tendency of the soil to wash. Jefferson's lands were no exception. Upon close examination he discovered that "a 10 year's abandonment of them to the ravages of overseers" brought them "to a degree of degradation" beyond his expectations.

Rotations

Jefferson determined to restore his depleted fields by a change in the system of farming. His first step was to substitute potatoes, clover, and sheep for the customary corn and hogs. He had learned of the value of clover and sheep in maintaining soil fertility from Arthur Young, the great English agricultural publicist. He next determined his course of rotations. After discussing the problem with other agriculturists he adopted the following 7-year rotation based on the division of each farm into seven fields:

1. Wheat, followed the same year by turnips, to be fed on by the sheep.
2. Corn and potatoes mixed, and in autumn the vetch to be used as fodder in the spring if wanted, or to be turned in as a dressing.
3. Peas or potatoes, or both according to the quality of the field.
4. Rye and clover sown on it in the spring. Wheat may be substituted here for rye, when it shall be found that the second, third, fifth, and sixth fields will subsist the farm.
5. Clover.
6. Clover, and in autumn turn it in and sow the vetch.

Paths

Beaten paths are for beaten men.

—N. E. A.

Rulers

Great men are they who see that spiritual is stronger than material force; that thoughts rule the world.
—Emerson

7. Turn in the vetch in the spring, then sow buckwheat and turn that in, having hurdled off the poorest spots for cowpenning. In autumn sow wheat to begin the circle again.

It is evident that Jefferson intended to abandon tobacco entirely, raise only a little corn, and produce just enough wheat to supply necessary cash. The clover and vetch were to serve as soil-building crops and pasture for sheep. To best utilize the dung supplied by his stock, he planned to fold the sheep and cattle on the poorest spots, thus saving the labor and waste involved in hauling the dung from barnyard to field. He gave a lot of thought to the problem of fertilizing his fields, and his Farm Book contains notations on the best way to handle dung, the number of cattle or sheep necessary to manure a given area, and the way to determine whether folding or spreading dung would be most beneficial.

Moldboard Plow

At the same time Jefferson was trying new legumes and grasses to hold the soil and restore its fertility, he was turning his inventive genius to improving the plow. While he was abroad the whole problem was brought home to him as he watched the peasants in France struggle with their heavy ox-plows. Struck with the extreme drudgery of their work because of the lack of an efficient moldboard, he made a hasty sketch in his notebook of the way to shape a proper one, and, after his return to this country, began working on a model which he sent to Thomas Mann Randolph, his son-in-law, in 1790.

Once back at Monticello he began experimenting in earnest with his moldboard "of least resistance." After 5 years' experience had proved its practicability, he sent a detailed description and model to the American Philosophical Society.

The importance of this moldboard can hardly be appreciated today, when farm machinery of uniform design and quality is available to all. In Jefferson's time the moldboards were crudely constructed and no two were alike. The formula was so simple that it could be used by even "the most unlettered laborer," who was thus certain of obtaining an efficient moldboard exactly like the original.

Horizontal Plowing

In spite of his change in crops and his deep plowing, erosion continued to beggar his fields. Far from discouraged, Jefferson, in conjunction with Randolph, resolved to try a new method of plowing—"over hillsides horizontally." Where Jefferson may have learned such plowing is not known, but what is important is that the two men tried it and demonstrated to their own satisfaction that it really worked. All the time Jefferson was in the White House, Randolph managed his estates for him, and among the memoranda Jefferson sent the overseers is the instruction that "all ploughing is to be done horizontally, in the manner Mr. Randolph does his." Jefferson remained an advocate of horizontal plowing all the rest of his life. Writing to a friend in 1813 he described its effects and its appearance as follows:

> . . . We now plough horizontally, following the curvatures of the hills and hollows, on the dead level, however crooked the lines may be. Every furrow thus acts as a reservoir to receive and retain the waters, all of which go to the benefit of the growing plant, instead of running off into the streams. In a farm horizontally and deeply ploughed, scarcely an ounce of soil is now carried off from it. In point of beauty nothing can exceed that of the waving lines and rows winding along the face of the hills and valleys. The horses draw much easier on the dead level, and it is in fact a conversion of hilly grounds into a plain . . .

Diversified Farming

There was no phase of farming that Jefferson did not consider. Vineyards, orchards, gardens, and livestock all came in for attention. The fruit grown at Monticello was noted for its fine flavor, and he constantly sought new species and varieties to add to his nursery. Gradually he replaced some of the rail fences along the field boundaries by peach trees.

His Garden Book, covering a span of 58 years, is evidence of the importance he attached to his gardens. In the vegetable garden, terraced so that it wouldn't wash away, he experimented with 32 different vegetables. He managed to have some kind of garden produce the year round. A vast correspondence relates to the trees, shrubs, berries, and vegetables ordered from the leading dealers in Philadelphia and Georgetown, and to innumerable gifts of seeds and plants received from friends in this country and abroad.

Improving American livestock was another of his farming practices. Starting with ordinary sheep, he imported blooded Spanish Merinos to build up and improve his own and his neighbors' flocks. He had some broad-tailed Tunisian sheep, but his attempts to breed them failed. To guard his flocks he raised shepherd dogs that were highly prized—the original pair was a gift from Lafayette. He imported Calcutta hogs, noted for their rapid growth and was interested in fancy poultry.

Experiments for Others

Although engaged in all the usual routine of the farm when at home, Jefferson found time to try out new implements, such as the Scotch threshing machine and Martin's seed-drill, on which he frequently made further improvements. He himself invented a hemp brake to facilitate the extraction of the fiber from the plant. He once said that "the few who can afford it should incur the risk and expense of all new improvements, and give the benefit freely to the many of more restricted circumstances." It was this generous impulse that led Jefferson to experiment with new crops, new techniques, and new breeds of livestock, in the hope that his findings would be of use to all the farmers of the Nation.

Impact of War ON OUR *Forests*

By R. N. CUNNINGHAM. *Strategic values of wood and wood products have brought a better utilization of many woods but have brought also an intensified and concentrated cutting in the forests, says this forester, who outlines five ways to safeguard future productivity.*

LUMBER is more critical than steel today in the economy of war. It is needed for camps, boats, gliders, plane propellers, and for crating overseas shipments. Paper, needed to package food supplies and to protect war equipment for shipping, is scarcer than aluminum. Veneer for planes and boxes ranks close to oil and tin as a war material. In the two and one-half years since Pearl Harbor, lumber, paper, and other forest products have advanced from a rather obscure place in the war economy to this position in the front rank.

The impact of this tremendous demand with fairly high prices and the Government's efforts to stimulate production is beginning to be felt in the forest. It is reflected in (1) greatly accelerated rate of lumbering, (2) excessive concentration of cutting in certain areas and a tendency to cut timber too young and too ruthlessly, and, on the other hand, in (3) a better utilization of inferior species and parts of the tree formerly wasted.

Some of these developments are good. Others offer a serious threat to resources which will be needed during the reconstruction after the war and possibly for other emergencies in years to come.

No one would suggest withholding a single stick of timber that would help to shorten a battle or give added protection to men at the front. Overcutting must be tolerated in time of war. It is appropriate, however, to consider all practicable means by which the needed timber can be produced with the minimum of permanent harm to the forest. The potentialities of our forests are still very great if their utilization is properly organized.

The extent of increase in production of forest products has been remarkable considering the handicaps that have faced the industries—manpower shortages, bottlenecks in equipment, dislocated markets, restrictions on buying and selling. With typical American zeal in cases of emergency, farmers, lumberjacks, and timber operators have responded to the call for forest products for the war. More lumber, more pulpwood, more veneer bolts, and more ship timbers have been cut and delivered in the years since Pearl Harbor than for many years before. From a pre-war average of 25 billion board feet per year (1936–40) United States lumber production was lifted above 35 billion board feet in each of the war years. Pulpwood deliveries, about 10 million cords per year from 1937–39, increased to nearly 7 million cords in 1942 and nearly 15 million cords in 1943, and are expected to be about 14 million cords in 1944. Production of veneer logs and many other products has followed a similar course.

For Instance

Take the Lake States forests as an example. As they are made up mainly of small trees in swamps or on previously logged-over uplands, they have been called upon less than some others for ordinary lumber but they have made a large contribution in pulpwood, and the remaining virgin hardwood forests and farm woodlands have produced high-grade veneer logs, ship timbers, and box materials in considerable volume. Paralleling the national trend, Lake States lumber production increased from 596 million feet in 1934 to 781 million in 1939, and more than 1,000 million feet in 1942 and 1943. Pulpwood consumption rose from 1,305,000 cords in 1934 to 1,659,000 in 1939, and more than 2,000,000 cords in 1942 and 1943.

Concentrated Cutting

Shortage of road-construction equipment, trucks, and manpower means that logging is not proceeding into the more remote districts as rapidly as it logically would. There mature and over-mature stands are still to be found. Logging is not being conducted in the form of partial cuts over extended areas in a way to stimulate regrowth. Instead, it too, largely is concentrated in accessible young forests and too commonly consists of clear-cutting immature timber.

Predictable

Results are readily predictable. On the most accessible and most productive lands, the region at best will have a forest of very young seedlings incapable of yielding additional products for several decades. On the more remote and less fertile lands, it will have the ragged remnants of an overmature and decadent forest ravaged by insects, disease,

Cannot Budget

You cannot budget for freedom—for freedom is beyond price.

—Field Marshal Sir JOHN DILL

and windthrow. The Lake States region probably is fairly representative of the country as a whole in regard to this effect of wartime logging.

Closer Use

Intense demand from war industries for the better grades and better species of timber has encouraged the use of inferior woods for less essential purposes.

Railroad ties normally are made from oak, in the Lake States region. Today, some railroads are accepting ties of almost any hardwood species, including aspen, paper birch, black ash, elm. Paper mills are using much more aspen than formerly. Iron mines are taking aspen poles and slabs for lagging in place of the usual cedar and tamarack. Furniture companies find more uses for beech and soft elm. Many new uses are being found for eastern hemlock, cottonwood, Balm of Gilead, and willow. Industries that formerly demanded the higher grades of lumber are getting along with shorter lengths and lower grades.

Technical Advances

Technical advances in use of wood have contributed to this trend to better utilization. Development of glued-up timbers in place of large single pieces, improvements in veneers, modification of pulping processes, standardization of specifications for many products, have encouraged the use of poorer parts of the tree.

Opposite trends may be noted in some places. Because of labor shortage and increased labor costs, occasionally tops and limb-wood are now left to rot on the ground whereas formerly they were cut for fuel, for chemical wood, or for posts. But in general the effect of changed utilization has been beneficial to the forest, although it falls far short of offsetting the effect of heavy cutting.

Impairment

The net effect of heavy cutting, concentrated as it is in the most accessible and most thrifty young timber stands, is to impair the capacity of the forests to contribute to the reconstruction of homes and industries after the war, and may limit their ability to meet another national emergency should one occur within 20 or 30 years.

No justification for unnecessary timber waste can be based upon the belief that timber requirements will subside rapidly when the war is over. On the contrary, one can foresee intense demand for forest products for many years thereafter. New homes and new business structures will be needed. Farm buildings will require early attention. Construction of both railroads and highways will be renewed. Industries using wood fiber and wood distillates as a basis for new products already are scouting the area to learn its possibilities as a source of raw materials. Prospective demand for wood is almost limitless.

Human Aspects

Finally, thought must be given to the social and economic effects of deforestation upon the people living in the forested areas, including those now enrolled in the armed services.

Normally, 150,000 men obtain all or a substantial share of their income from occupations connected with the forests in the Lake States region alone. Many more farmers and settlers cut fuel-wood, fence posts, and other forest materials for their own use or for sale. Today, many of these men are serving their country in other parts of the world. When they return, they will want to find not a devastated landscape and a bankrupt industry. They will want and expect to find conditions under which they may have stable work and an opportunity to prosper.

Combinations

Whatever back-to-the-land movement may develop in the wooded sections of the Lake States after the war will have to be based, not strictly upon agriculture, but upon a combination of farming with some outside employment. Normally, the forest should provide jobs for many farmers near their homes in addition to supporting numerous industries in nearby towns. But if, in addition to the mature timber, all the young timber that should provide such work for the next generation is cut away now, the basis for a sound rural economy will be greatly diminished. So far as is humanly possible, the men who have the responsibility for harvesting wartime timber crops should see that this condition does not prevail.

To Safeguard

It is easier to recognize the dangers in the present situation than it is to devise a remedy. Most of the countries engaged in this conflict are finding it necessary to overcut their forests. But overcutting for a period of years need not be disastrous if it is done in such a way that it will not destroy the recuperative power of the forest. In thinking over what might be done to safeguard the future productivity of the forest, several possibilities come to mind.

(1) Open up more of the remote or otherwise unavailable stands of mature timber. Where accessibility is the controlling factor, a transportation program supported and pushed by every feasible means is the answer. Where economic or sentimental factors are the chief obstacle, appropriate means must be found for bringing the timber on the market, for national interests are at stake.

(2) Obtain the remainder of the requirements, so far as practicable, from thinnings, partial cuttings, and salvage of scattered, overmature, or defective timber. Experiments have demonstrated that two, three, and even more light thinnings can be made in pine and spruce forests without decreasing the volume of final yield. In fact, the rate of growth and the quality of timber in a carefully thinned timber stand exceed that of an untouched forest.

(3) Develop new devices and new techniques of operation which will cut costs and save manpower. Already new devices designed to simplify the loading and transporting of forest products have reduced manpower requirements, cut costs, and widened the practical range of operations for loggers.

(4) Intensify efforts to improve utilization and find new uses for the products of the forest that are now wasted. Wood chemists are opening up new possibilities in plastics, wood distillates, and other products; timber engineers continue to find new uses for the lower grades of wood. The

more these developments can be speeded, the less will be the wastage of raw materials from the forest.

(5) Keep fingers on the pulse of the forest and the forest industries. Facts concerning the condition of the forests, their rate of growth, and their rate of depletion should be kept currently recorded, so that measures can be adapted to meet changing conditions.

Teamwork

All of these aims call for close cooperation between landowners, timber operators, State, county, and Federal foresters. Fortunately, a wholesome attitude of teamwork has been developed during the war. First in fire protection, then in collection of industrial statistics, finally in overcoming bottlenecks to expedite production, the several groups have worked together for a common purpose. In the process, landowners have learned that forests, rightly handled, can yield substantial profits. Timber operators, many of whom used to think of professional foresters as impractical and arbitrary, have come to value highly their technical advice. Public foresters have learned more of the many and varied operational problems of the landowners, loggers, and mill men, and will be better prepared to help them in the future.

This augurs well for teamwork in the broader aim of managing the whole timber resource for maximum efficiency during the war and of leaving it in the best possible shape for our young men when they come back from the war.

The land of America is covered with the aftermath of the corn harvest. Shocks follow the sweep and curve of the hills, the dip of the valleys. Stalks stand like spectres upon the fields. A European, homesick for his own country, thinks of vineyards or little farms. An American, lonely in a foreign land, sees fields of corn. He sees pale rows across the earth in spring, and solid stands of corn in summer; but most of all he sees dim gold shocks upon his homeland in the fall. He sees bright little yellow pools at the foot of these shabby shocks, as solitary figures husk the corn in the first cold of winter. He sees corn-filled cribs, and ears in the shelter of barns. And seeing all these, he will hold fast to them; for he knows these will endure, when empires have fallen and the quiet of the battlefield is broken only by ghosts.

—Clare Leighton, in *Give Us This Day*,
Reynal & Hitchcock.

Books

An American Dilemma: The Negro Problem and Modern Democracy. By *GUNNAR MYRDAL* with the assistance of *RICHARD STERNER* and *ARNOLD ROSE*. Harper and Brothers. New York. 2 v. (Bibliography.)

THESE two volumes are much less a compendium or summary of the many researches undertaken in the Carnegie Corporation's study of the Negro in America than they are an *interpretation* of the American Negro problem. The interpretation is Gunnar Myrdal's own, one he has thought out himself. At the same time it is an eclectic interpretation, with free borrowing from the well-known approaches to an understanding of race in America—the psychoanalytic, the cultural, the moral, the economic, the historical.

Although most of the facts, theories, explanations, and documentation of the volumes are not new to readers of the great store of literature on the American Negro, the way they are put together to make an integrated case for Myrdal's interpretation is novel. The immortality of the book will hinge upon the validity of that interpretation, and the validity will in the end be tested as much by the unfolding events in the dynamics of racial interaction in America as by the critical scholars of race.

The American Negro problem, according to Myrdal, is primarily a white man's problem which exists within his heart. The "American Dilemma" is the internal conflict raging between the white man's belief in the American Creed of "the essential dignity of the individual human being, of the fundamental equality of all men, and of certain inalienable rights to freedom, justice, and a fair opportunity" and his valuations on specific planes of reaction, especially with regard to the Negro. Thus the Negro problem is a moral problem, in which conflicting valuations lead to moral compromise.

Though not given to prolific predictions, Myrdal seems to have faith that the American Creed will, in the long run, win out. In their institutions, American people have placed their ideals of how the world ought to be and thus these ideals become more powerful forces, in turn, modifying the behavior of the individuals. This is Myrdal's theory of social self-healing which takes place in a democracy.

A brief review of these volumes could not begin to list the many facets of American life which the author probes in his sweep of our culture from a "frog's eye" point of view for their bearing on the American race problem. A chapter-by-chapter abstract prepared by E. Franklin Frazier fills this need ably and relieves reviewers from the altogether impossible task.

MORE SUGGESTIVE to potential readers than a detailed listing of subjects covered might be an indication of the uniquenesses and the emotion-provoking features of the volumes. First there is the tone, which is exceedingly personal—one can almost feel himself a Swedish visitor observing American patterns of behavior in race relations for the first time. Next there is the uncertainty as to what level of audience the writer had in mind when he wrote, since at one place there will be unexplained allusions to sociological or philosophical theories with which the reader is assumed to be familiar, and at another the assertion of some ultra-simple fact as if it were a new discovery. Next there is the almost studied attempt to disavow allegiance to any of the previously existing schools of thought on the American Negro—especially the doctrines of the Communist party or the rationalizations of Southern liberals—even though such thinking has had an important role in the development of Myrdal's own interpretation.

FINALLY, there is the flattering technique, which Myrdal may have learned from the Negro. He takes the privilege of criticizing us only according to the inconsistency of our actions with the American Creed, to which he pays high tribute. After more than a thousand pages of critical appraisal of our culture and behavior, which will evoke sensitive reactions at one place or another from almost any reader, he "makes up" by expressing great confidence in America's future role as the most powerful white nation and in the inherent goodness of American people.

—*Margaret Jarman Hagood*

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PLANNING FOR THE SOUTH. AN INQUIRY INTO THE ECONOMICS OF REGIONALISM. By *JOHN V. VAN SICKLE.* Vanderbilt University Press. Nashville, Tenn. 250 pages.

THIS BOOK by an intellectual liberal weaves into one statement: (1) An analysis of certain major southern problems; (2) an appraisal of various social control measures, largely those of a governmental nature; and (3) a set of recommendations or suggestions for future action. With a few minor exceptions, the discussion pertains to the pre-war situation.

The author's social philosophy, which by the very nature of the book pervades every part of every chapter, is that of a middle-of-the-road liberal of the Walter Lippmann school.

If this brand of liberalism could become widely accepted, tolerantly interpreted, and vigorously pursued, it would afford a rational basis for many highly constructive lines of activity both within and without the South. The greatest weakness of this brand of liberal doctrine revolves around the relations of the State to organized labor. If labor is not *just* *a commodity,* then the concept of "perfecting the market" does not afford the necessary basis for delineating the responsibilities of the State to labor. Van Sickle's handling of labor problems is limited by this weakness of his social philosophy. He favors trade-unions and collective bargaining, but he throws no new light on the problem of the State's proper relationship to labor unions. Since he gives much more space to an analysis of labor unions and their activities than he does to such institutions as trade associations, cartels, farmer organizations, monopolistic pricing, marketing quotas, and parity price legislation, he opens himself to charges of not handling the topic objectively.

Like most other recent students of southern conditions, the author finds that the poor soil and dwindling natural resources of the South, coupled with its rapidly multiplying population, are the principal explanations of the general poverty of the region. The South's economic and social conditions are so bad, he believes, that they have important *national* implications. Hence they warrant corrective action of a type which includes but goes beyond the scope of that which can be taken within the region. Moreover, such action must result in differential Federal aid to the South, in a broad sense, and be aimed at bringing about a gradual equalization of interregional conditions. Particularly, he argues, encouragement should be given to a greater expansion of industry in the South.

The author contends that public action should be concentrated mainly upon: (1) Maintaining and improving the natural resources; (2) improving the health and education of the people; and (3) removing various restrictions, impediments, and inflexibilities in our social and economic organization in order to improve the workings of the free enterprise system.

IN HIS SUGGESTED division of responsibilities for carrying out these lines of action as between Federal and non-Federal units of government, he generally leans toward more State and local participation than existed in the thirties. However, he still imposes upon the Federal Government large and important responsibilities.

Van Sickle's discussion of Proposed Goals for the Southern Region gives an excellent summary of the most important conflicting views among southerners as to the proper or desirable future of the South. He finds little place for either the extreme of southern agrarianism or for a South whose main function is to supply labor and raw materials to an expanding industrialism in the North and East. Rather, he expects a greater regional diversification of economic activity.

In his final chapter, he suggests a national tax system far in advance of popular thinking. In general, it involves heavy reliance on progressive income taxes to be collected by the Federal Government and a rebating of revenues to State and local units of government through a system of differential Federal aids.

Taken as a whole, the book provides a point of view, and suggests courses of action which, if courageously carried out, would give us a better Nation and a greatly improved South.

—James G. Maddox

Price Making in a Democracy. By *EDWIN G. NOURSE.* The Brookings Institution. Washington, D. C. 541 pages.

HERE IS another addition to the list of current publications which attempt to chart economic policies to improve the functioning of the private-enterprise system. The author stresses the point that the modern economic system is considerably dominated by large corporate aggregations which have sufficient discretionary economic power to enable them to adopt short-run price and production policies that do not promote long-run full employment of productive resources. Competition among these firms is not considered adequate to pass on to consumers, through appropriate prices, the full benefits of technological and other business-enterprise improvements. Under the current pricing practices these benefits accrue too much to owners and managers of enterprises with a corresponding tendency for resources to go too largely into unutilized plant capacity and too little into increased production of consumption goods for the masses.

Long-run interests of business enterprises, as Dr. Nourse sees it, lie in pursuing a "low price policy" which will enable consumers to buy the increased production made possible by technological advance. If such a price policy were followed generally, owners of business enterprises would receive greater aggregate profits (although probably a smaller proportion of the total national income), human and other resources would be more fully employed, consumers would enjoy a higher level of living, and the need for Government interference would be greatly reduced. Pricing policies designed to expand the demand for products as much as possible within the limits necessarily set by costs would achieve the beneficial results that early economists expected to follow automatically from competition in a simpler kind of economic system.

Many problems faced by business enterprises operated for profit when putting into effect a low price policy are explored systematically. But despite the difficulties, the author thinks that business leaders can accomplish much for themselves and for the mass of consumers if they will adopt the longer-run view that continued profits result only from a healthy economy. A major part of the book attempts to convince business leaders that they can and should utilize the discretionary economic power inherent in control over large aggregations of productive resources to make the private-enterprise system function better both in their own and in the public long-run interests.

The philosophy of a low price policy is presented as a partial substitute for expanded functions of government in economic matters. Dr. Nourse presents his confession of faith in private enterprise early and often, but frankly recognizes that it must remain largely a matter of faith that cannot be subjected to scientific analysis. Whether others agree with him on this matter need not impair the usefulness of the central core of his economic analysis. He sets forth clearly the policies that he believes private enterprise would need to follow to promote full employment. Individual readers are left free to reach their own conclusions regarding the willingness and ability of private enterprise to follow this charted course.

This reviewer shares the skepticism of those cited in the book who doubt the ability of business leaders to effectuate a low price policy on a broad scale. It is not clear that even the long-run economic interest of individual business leaders lies in foregoing the exploitation of a monopolistic situation to obtain larger immediate profits from less than maximum feasible production. It would be unfair to label Dr. Nourse's analysis as "mass-meeting economics," yet it does have some traces of that approach. Under his plan it would be the concerted action of business leaders rather than real competition that would promote consumers' interests. Associations of business leaders would have to be willing collectively to assume responsibilities for the public welfare comparable to those usually assumed by government. Some may well question whether the public can permit business leaders to exercise the economic power necessary to effectuate a low price policy without running too great risks of abuse of that power.

THE ROLE of government needs more analysis than is given in this book. Can we be sure that assumption of greater responsibility by business leaders for proper functioning of the economic system would reduce the aggregate sphere of governmental action? Might it not just change its form? It is hoped that a subsequent publication will tackle the question of the specific role of government in such a scheme. Is there a place for government aid in facilitating the outlined low price policy? What correlative safeguards would be needed to insure that added economic power resulting from greater cooperation among business leaders will be used in the public interest? It may be that more rather than less governmental activity would be required to make this "cooperative" business competition an effective organizing force in our economic life.

For professional economists Dr. Nourse's observations on the place of the economist in the formulation of business policy is of interest. He would have the economist stick to his last as a social scientist and not attempt to take responsibility for final business decisions. He would have the economist attached to business enterprises work in the atmosphere of scientific objectivity demanded by the industrial chemist. The same arguments probably could be advanced with equal force for confining the Government economist to the field of objective scientific inquiry.

A SIX-PAGE SUMMARY of the book with which the final chapter opens will interest those who like to take their economics in concentrated form. After reading it the reader wonders whether so many pages were needed to develop the thesis. The rather elementary discussions at various points may be justified, however, by Dr. Nourse's wish to appeal to a reading public much larger than that made up of his fellow economists.

—Donald C. Horton

NATURAL PRINCIPLES OF LAND USE. By *EDWARD H. GRAHAM.* Oxford University Press. London, New York. 274 pages. (Bibliography.)

DR. GRAHAM makes use of a rather varied experience in the fields of botany and ecology and as Chief of the Biology Division, Soil Conservation Service, to build this treatise which is based on "the premise that biological concepts can contribute importantly to the wise use and management of land."

Following five rather general background chapters, dealing with the character of those natural forces and relationships which constitute plant and animal life on the land, comes a study of landscapes, types of land, land use capability classifications, and land-management tools. Then farms, forests, and range pass in review with rather general discussions of conservation, resource classifications and institutional controls, along with an examination of the relationships of plant and animal life on these three types of land use. Wildlife in relation to land use is considered and stream pollution subjects, such as the use of wet lands, farm ponds, and water supplies. Control of land pests and "Exotic Things" are discussed and the final chapter, "The Land And Human Welfare," considers briefly some of the important relationships between the land and man's personal welfare.

Abundant photographs serve to vitalize the text and to bring the reader closer to the theme with which the author has concerned himself. Both professional and lay readers should find the style easy to read, with considerable landscape romance scattered throughout.

The author sees the need for land-management biologists to provide a new horizon in connection with the larger field of land use and conservation. The task of these workers would be "to maintain a reasonable balance between communities of living things and land-use practices." He urges that more general recognition be given to the fact that ecological forces greatly influence the possibility of the control of soil erosion, and that a proper understanding of such forces will permit land-management programs consistent with the most productive pattern of land use. Consequently, the author feels that these biologists should familiarize themselves with the tools of land management in order that they may contribute to the proper classification and development of land resources. Emphasis is given to land classification, particularly to the use-capability classification used by the Soil Conservation Service, as a most productive land-management tool in directing land uses and practices.

The general impression received by the reader is that the book is a plea for giving greater attention to mutual relations between organisms and their environment when planning programs of land utilization and conservation. It stresses the benefits from a proper balance between animal life and land. The author recognizes that conservation of land resources is a social problem, but his analysis does not carry through to this point. Actually, it is very difficult, if not impossible, to analyze principles of land use except through the discipline of the social sciences.

—*V. Webster Johnson*

How To Live in the Country Without Farming. Planning and Establishing a Productive Country Home. By *MILTON WEND.* Doubleday, Doran & Co., Inc. Garden City, N. Y. 316 pages.

So You're Going to Buy a Farm. By *DAVID B. GREENBERG* and *CHARLES CORBIN.* Greenberg: Publisher. New York. 140 pages.

Woodland Opportunities on Dairy Farms in New York. By *HUGH A. JOHNSON, IRVING F. FELLOWS, DONALD RUSH, C. R. LOCKARD,* and *C. EDWARD BEHRE.* Charles Lathrop Pack Forestry Foundation. Washington, D. C. 35 pages.

Practical Farming for the South. By *B. F. BULLOCK.* University of North Carolina Press. Chapel Hill. 510 pages.

How to Live in the Country Without Farming is for the white collar worker who is weary of subways and hustle, whose mind is running to grass and gardens and a country home, but who perhaps lacks the capital, experience, or inclination to run a farm. It is as full of advice as a village barber—much of it good, however. It tells you everything from how to buy a country property down to the calculation of a hog's weight by shrewd measurements fore and aft.

Many of the suggestions on how to live comfortably in the country are as useful to farmers as to others. Each chapter carries an excellent reading list, opening the road to further study. The book lives up to its title, on the whole, and will make interesting reading for many an urban soul who now goes downtown every morning reluctantly.

So You're Going to Buy a Farm is another addition to the flood of literature for the back-to-the-landers. It contains good chapters on financing the purchase of a farm, on the problems and pitfalls of the "week-end farmer," etc. Most of its advice is sound and sensible, though stereotyped. The book is about equivalent to an hour's talk with an intelligent farmer or county agent.

Woodland Opportunities on Dairy Farms in New York gives the results of a farm-management study made by the Bureau of Agricultural Economics and the Forest Service in Otsego County. In 1937 a farmer's cooperative in that county built a modern wood-working plant which provided a ready market for products of the local farm woodlands. This development made that area peculiarly suitable for studying how such dairy and poultry farms might enlarge their incomes by better use of their woodlots.

The pamphlet analyzes the business of 90 farms, all members of the Forest Products Cooperative, and gives detailed plans for reorganizing three of them, suggesting certain improvements in farm management and particularly in handling the woodlots—selective cutting, no grazing, better planned work in woods, etc. Underneath its stuffy, academic verbiage, this is a valuable study in land use, offering food for thought to many owners of eastern hill farms. The Pack Foundation has contributed a nicely turned out publication.

Practical Farming for the South is in the nature of a book for agricultural teachers of young people in the South. It is more or less like scores of other books on the fundamental principles of crop and animal production, although it has a distinctive sectional slant. Part One is on plant production; Two is on animal production; a short Part Three takes up farm financing and gives a very good reference list of books and bulletins, plus some discussion of Mr. Faulkner's new ideas on plowing. The book is comprehensive, well organized, well written, conveys the basic principles of agriculture in a clear common-sense way, and should be useful for years. If this reviewer were an agricultural teacher in the South he would certainly welcome this book.

—*A. B. Genung*

* * *

FOOD, WAR, AND THE FUTURE. By *PARMALEE PRENTICE.* Harper & Brothers, New York and London. 164 pages.

THIS VOLUME by the Don Quixote squire of Mount Hope Farm is a tract for the times. The main themes of the author's warnings to the present generation are here presented in distilled but potent form. They constitute a distinctly individualistic analysis of the experiences of the past in their inevitable relations to the somber present and the direful future.

Recapitulation of a subject as broad in scope as the one here explored is difficult and dangerous, but the main argument is that great population increases, lack of adequate and equitably distributed national resources, diminishing production of foodstuffs, dependence of densely populated Europe on manufacturing, without free access to markets, are the main menace to the peace of the world. Unless the tide of population growth in the wheat-consuming countries is stemmed, the sort of poverty now limited to Asia will spread to and overwhelm the western world. To thwart the fulfillment of this dire form of Malthusianism we must deliberately and consciously apply the growing knowledge of the laws of animal and plant breeding. To this end much of the work of the author and his associates at Mount Hope farm is dedicated.

In this volume the agricultural colleges are singled out for particular excoriation. The manner in which most of the agricultural professors accepted, repeated, and perpetuated the " 'pure-bred' notion" is explained in detail and offered as the main basis for the author's conclusion that "The [agricultural] colleges . . . stand athwart the path of progress." So far as the livestock and dairy industries are concerned, he believes that the need is modern biologists, for "Modern Bakewells are an anachronism and intolerable."

The question of whether persons engaged in educational work should be connected in any way with commercial interests that stand to gain or lose by the instruction they may give is also analyzed briefly but pointedly. The conclusion of the chapter on A New Agriculture for the Twentieth Century is that "Agricultural colleges have done little original work." In view of the vital relation of the colleges and experiment stations to food production, this chapter is a challenge to which the entire citizenry must give constructive thought. —*Everett E. Edwards*

Evolution of a Farm Saying

Aristotle (*B. C. 384–322*) related that **Perses** had declared that the master's eye was the best thing to make a horse fat, and that **Libys** had affirmed that the master's footsteps were the best manure for his land.

In the *first century A. D.,* **Plutarch** quoted as a saying:
Nothing fattens the horse so much as the eye of the master.

And **Columella** wrote:
Wherever the eyes of the master, himself upon the spot, have been frequently cast, in that part the fruit will ripen in greater profusion.

And **Pliny** wrote:
The eyes and footsteps of the master are very wholesome things for the field.

In *1662* **R. Watkyns** reminded his readers that—
The master's eye, as it is always found
Doth fat the horse; his foot doth fat the ground.

Today it is said:
The footstep of the farmer is the best manure for his farm.
The eye of the farmer is the best feed for his cattle.

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Universal

There is a maxim universally agreed upon in agriculture, that nothing must be done too late; and again, that everything must be done at its proper season; while there is a third precept which reminds us that opportunities lost can never be regained.

—Pliny the Elder

Land policy REVIEW

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Contributors

Editorial Note: TAKING STOCK of requirements and resources from a world viewpoint engrosses the attention of the Winter Number as the hostilities in Europe draw toward a close and the time for reconstruction looms inevitably ahead. The problems that face this country, as outlined here, are sobering but not insoluble and the potential resources on which many of the solutions must be based are shown to be reassuring.

IRENE B. TAEUBER is coeditor of *Population Index* and is research associate of the Office of Population Research of Princeton University.

JOHN F. TIMMONS, a land economist in the BAE, recently returned from additional special study of land problems at the University of Wisconsin.

CHARLES L. STEWART, who is known for his many interests in many lines, is professor of agricultural economics and chief of land economics at the University of Illinois.

ROY F. HENDRICKSON is Deputy Director General of the United Nations Relief and Rehabilitation Administration and author of *Food "Crisis"*, which was reviewed in the Spring number of this magazine.

JAMES G. MADDOX analyzes critically the proposed current and post-war economic programs as special assistant to the Chief of BAE.

BENSON Y. LANDIS, formerly secretary of the American Country Life Association, is now associate secretary of the Federal Council of Churches; L. H. BEAN is chief fiscal analyst, Economics Section, Bureau of the Budget; MARY U. ROTHROCK of the TVA is specialist in library service on the Training and Educational Relations Staff; NORMAN J. WALL, Head of Division of Agricultural Finance, and GLADYS BAKER, agricultural historian at work in the War Records Project, are on the staff of the BAE.

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Growth OF THE *World Population*

By IRENE B. TAEUBER. *This brief review of the world population considers both hemispheres, all continents, many regions, and certain danger spots—notably mainland Asia. Economic and agricultural implications of population growth and declines are outlined.*

THE RELATION between the number of people and the food supply is at once the most obvious and the most fundamental of all demographic relationships. Before the seventeenth century, population size, distribution, and rates of increase within local areas were determined largely by the food which could be produced regularly within those areas. Food deficiencies and ignorance of the basic principles of diet and sanitation produced appallingly high death rates, even in normal periods. Recurring famines and epidemics tended to wipe out the natural increase of good years. Population increase was slow and irregular, but the general trend of population was upward. It is estimated that 500 million people lived in the world of 1650.

A general improvement in the conditions of living which began in the seventeenth century resulted in rates of increase unparalleled in world history. The agricultural, industrial, and commercial revolutions brought assured food supplies, public sanitation, medical science, general education, and expanding consumer incomes to an increasing proportion of the people of the Western world. The increased agricultural productivity, relative political stability, and minimum famine and epidemic controls which accompanied the world-wide expansion of the economy of the West resulted in accelerated rates of increase in the great agrarian regions of southern and eastern Asia. The world's population, which had increased to only 500 millions by 1650, increased to more than 2 billions by 1940.

Practically all regions of the world have participated in the population increase of the last three centuries, although at widely varying rates at the various time periods. The population of the Americas increased at an extraordinary rate, owing to the coincidence of heavy immigration and high rates of natural increase. The population of Africa, on the other hand, remained relatively stationary until the middle of the nineteenth century. In the three centuries between 1650 and 1940, Europe not only furnished the migrants who peopled the Americas and Oceania but quadrupled its own population. If the generally accepted estimates are valid, the population of Asia practically trebled during this period. In the recent period, rates of increase have been slowing down for Europe, speeding up for Asia.

Decline in West

The accelerated growth which accompanied the industrialization and urbanization of Western peoples was transitory. It was produced by a time lag between the decline in death rates and the decline in birth rates. The immediate effect of the agricultural and industrial revolutions was to decrease mortality, leaving relatively intact the large-family pattern which had been essential to group survival in the subsistence agrarian economies of the ancient and medieval worlds.

Gradually, however, new individual and group values developed in response to the changed conditions of working and living in industrialized urban areas. The small-family pattern became not only the ideal but also a goal realized by increasing proportions of the population. Birth rates fell rapidly, at first in cities, later in the surrounding rural areas.

Demographic transition from high mortality and high fertility to low mortality and low fertility is well advanced in the nations of Western civilization. Within a generation, relative stability or actual decline will characterize the populations of all the economically advanced industrial and urbanized nations, including all Europe except the extreme east and south, the United States, Canada, Australia, New Zealand, and the white population of the Union of South Africa. But taken together, these nations include less than one-fifth of the world's population.

Areas well advanced in the demographic transition from high fertility to low fertility, but with a potentiality for substantial growth for at least a generation or two, include the Soviet Union, Japan, eastern and southern Europe, and parts of Latin America. These regions contain another fifth of the world's population.

Areas of the world in which population growth will probably cease within the present century include less than 40 percent of the world's population. With the major exceptions of Japan and Soviet Asia, they are limited to Europe, the Western Hemisphere and Oceania. They are either already industrialized and urbanized or in process of rapid industrialization and urbanization.

Increase in East

The potential growth of the great agrarian regions of Asia and Africa stands in striking contrast to the

New Fields

It is characteristic of Science and Progress that they continually open new fields to our vision.
—Pasteur

slowing growth and incipient decline now characteristic of the Western industrial regions. During the last century or so, the peoples of India, Java, central Africa, and the world's other colonial areas have tended to increase at an accelerating rate. Western penetration has meant relative political stability, the extension of agriculture, and minimum standards of epidemic control and famine relief. If such penetration has been economically and culturally "enlighttened," it has attempted to leave intact the values of the native cultures, while utilizing native laborers as producers or processors of raw materials for the export market. Thus mortality is controlled, but barriers are placed against the development or the diffusion of the standards and values that might limit fertility.

Numerical increases brought by the limitation of mortality in Asia and Africa cannot be measured precisely because of the deficiencies in both census and vital-statistics records. The generally accepted estimates indicate that Asia outside the Soviet Union had a population of 916 millions in 1900, and 1,184 millions in 1940—an increase of 29 percent in 40 years. Although an increase of more than 250 millions in less than half a century is great in quantitative terms, the rate of increase was fairly slow. The population of India grew at the rate of 1.4 percent per year between 1931 and 1941, producing a net increase of 50 million people and the average annual percentage rates of increase between the most recent censuses were 1.4 for Burma, 1.2 for Korea, 2.2 for the Philippine Islands, and 2.4 for Formosa.

Illustration

The demographic history and the prospects of Formosa illustrate in miniature the population problem of the overcrowded regions of the world in which the demographic transition which accompanies industrialization and urbanization is still to occur. The Japanese conquerors maintained the native Chinese people in relative isolation from the outside world, with minimum possibilities for individual or group cultural and economic advancement. Their function was that of labor in a commercial agriculture that was to assist in eliminating the dependence of Japan on foreign sources and to contribute to its foreign exchange.

Rational exploitation of the agricultural possibilities of Formosa was necessarily accompanied by the development of public sanitation, compulsory vaccination, malaria control, and public health. The result of this policy was that death rates declined from 33 per 1,000 population in 1906–9 to 20 in 1935–37, while birth rates fluctuated irregularly between 40 and 45 per thousand population. As a result of the coincidence of declining mortality and stable fertility, the population of Formosa increased 93 percent in the 35 years between 1905 and 1940, 13 percent in the 5 years between 1935 and 1940. Obviously no population inhabiting a limited and already densely settled area, and dependent on agriculture, can reproduce indefinitely at this rate.

Determinants

The problem of estimating the future population of Asia or Africa is not answered by a consideration of the theoretical possibilities for growth. Rather, the rate of increase will be determined by the food, knowledge, and medical facilities available for the support and preservation of population. Given relative stability, the continuation of agricultural improvements, basic epidemic and health protection, and the availability of famine relief, the acceleration of the rate of population increase might continue for another generation or so into the future. Eventually, however, stability of population must be achieved in the East as in the West. Whether it will be achieved through declines in fertility or through increases in mortality depends on the nature of the social and economic life of the future, not on demographic factors narrowly conceived.

Implications for Agriculture

Agricultural overpopulation and the pressure of population on the land are decreasing problems in the demographically advanced nations of the West. But aging or aged populations present many new types of adjustment problems to national or world agriculture. The types of food required and the elasticity of the demand for many foods shift drastically. Diversification and specialization of production must replace expansion of the great stable crops. If the general problem of maintaining a dynamic economy with a declining population is not solved, then the agriculture which is an integral part of the market economy will suffer because of the depressing effect of slow growth or decline.

A slowing growth of Western peoples is a fact to which agricultural population and agricultural policy must be adjusted. The future growth of population in Asia, Africa, and many lesser areas of the world, however, is related directly to the improvement of health conditions, the increase of agricultural production, and the development of facilities for trade. National and international policies with reference to the production and distribution of agricultural commodities will have a direct influence on the rate of population growth. In the advanced nations of the West, agricultural production is to a large extent a dependent variable. In the East, it is one of the major independent variables, whereas population growth is chiefly a dependent variable.

Local Difficulties

Population increase may continue to be rapid in Africa and the agrarian regions of Latin America, but no real problems of population pressure need develop. Potential resources of both continents are sufficient to care for any growth that is likely to occur during the demographic transition which will accompany the industrialization and modernization of economies. Certain local areas of acute overpopulation may present difficult local problems. The dense population of the valley of the Nile may have to be dispersed over a wider area, but space is available for such dispersal. Population problems may be difficult, but they are not insoluble.

Industrialization

In Asia the situation is quite different. Here the basic agricultural resources may be sufficient to provide a permanent minimum subsistence for the existing population if cultivated areas are extended, irrigation is expanded, and techniques of production are improved. There is no possibility for minimum living within agriculture for the increased population that would result from the introduction of the agricultural improvements necessary to provide a decent living for the existing population. Permanent solutions to the problems of population pressure in the overcrowded agrarian regions of Asia are impossible without industrialization. If industrialization occurs and if population growth follows the patterns it has followed in Europe, America, Oceania, and Japan, fertility will fall as urbanization and its correlated habits of living and thinking affect increasing proportions of the total population.

An introduction of industrialization sufficient to initiate the demographic transition from high to low fertility in Asia will probably occur, but this probability offers no basis for easy optimism as to the future. If mortality falls as rapidly as it has in other areas, and the process of diffusion of the small-family pattern from the city to the countryside proceeds as slowly, the differential between a rapidly declining mortality and a slowly declining fertility could produce huge populations. The theoretical potentialities for growth may be illustrated by a simple calculation. If the declines in mortality and fertility in China should duplicate those of Japan in its period of industrialization and urbanization between 1870 and 1940, China alone would have a population of more than a billion people by the year 2,000.

Major Problem

Mainland Asia will offer the major population problem of the world during the coming decades. Expressed in its simplest terms, it is a race between the expansion of agricultural and industrial productivity and the accelerated rate of population growth due to declining mortality. The real demographic need in Asia is to devise ways by which the diffusion of the small-family pattern among the peasants may be quickened. If that diffusion occurs through the slow process of diffusion from the cities to the countryside, truly incredible increases in agricultural and industrial productivity would be required to provide minimum levels of living for the increasing populations. If such increases were not forthcoming, mortality could not continue its downward course. Thus the education and social enlightenment of the rural peoples of Asia are essential elements in the solution of the economic and demographic problems of the continent.

DISTRIBUTION OF *World Land Resources*

By JOHN F. TIMMONS. *Extent of boundaries is shown to be of less real consequence to nations than the nature of their land and the forces that influence its best use, for ready access to a sufficient supply of food is the key need of all nations.*

IN HIS RECENT book, *The Time for Decision,* Sumner Welles uses agricultural land resources as one of the criteria for his recommended partition of the Third Reich. Two deductions that are significant of future events may well be drawn from Mr. Welles' analysis. First, it illustrates the profound importance commonly attached to the distribution of land resources in the alignment of national boundaries and in the stability of peace. Second, it suggests a fundamental and widespread weakness in reasoning that land resources can and should be divided among all the nations of the world in an equalitarian way.

Cursory examination of the nature of land resources gives a clear hint that the objective outlined at Hot Springs by the United Nations Conference on Food and Agriculture, "secure, adequate, and suitable supply of food should be a cardinal aim in every country," cannot be accomplished merely by a division of physical land resources among all nations. The problem is much more complex. To attempt to distribute land resources among all nations and partitions of nations without regard to location and irrespective of the economic and social forces that influence their utilization is an invitation to future trouble. Versailles and international experiences during the interwar period have furnished illustrations.

Further inquiry into this problem suggests that the key to a secure, adequate, and suitable supply of food becomes one of *access* to the products of land regardless of where the land may be located or in whom control may now be vested. In support of this conclusion, the natural distribution of land resources and the economic and social forces affecting their use do not permit them to be divided among nations in proportion to population. Furthermore, the distribution of land resources and the products of land among individuals within a nation appears to be perhaps more important than the distribution among nations and is certainly more difficult to work out internationally.

In a strict economic sense, land is defined as space and situation. It includes all the natural forces—sunshine, rainfall, temperature, topography, fertility—accruing to those in control of a particular area. Agricultural land resources, and for purposes of this article particularly those used for food production, include particular land areas and the appurtenant natural forces influencing the production of foodstuffs.

Although the physical supply of land—space and situation—is fixed and cannot be changed by man, the economic supply—that serving human needs — is flexible and changes in response to the need of the products and services derived from it. Thus the economic supply of land producing foodstuffs is continually changing in response to different quantities and kinds of food demanded by man. Through land reclamation and technological and transport improvements the economic supply is increased. Through deterioration, abandonment, and shifts to other uses it is decreased.

Physical Distribution

Physical forces fix the limits of land use. In large measure they determine whether or not a given area of land serves a useful purpose, or is merely so much worthless space, as the ice fields around the poles. Within varying degrees, food production must conform with the natural environmental forces.

Fortunately, lands capable of producing essential food crops are more widely distributed throughout the world than are other kinds of natural resources — petroleum, iron, coal, phosphate, copper, nitrate, etc. Food production in varying intensities and kinds is being carried on in every country. These pursuits vary from nomadic herding in Central Asia to highly mechanized grain farming in Kansas. In terms of living standards, food production varies from that of the meager subsistence of the Central African primitive tillers to the high standard of the prosperous Corn Belt farmers.

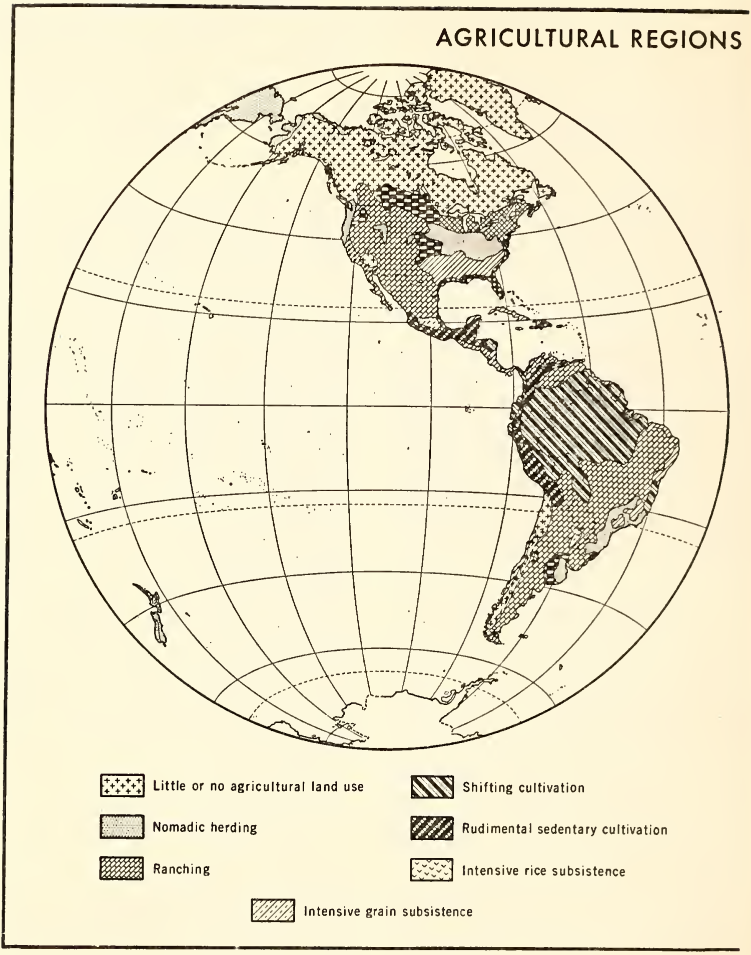
Available

Rough estimates show about 4 billion acres of arable land, roughly 12 percent of all land, upon which the world must depend for food. This is scarcely 2 acres for each of the world's 2 billion people. In some countries there is less than 1 acre per person despite the estimate of certain nutritionists that 2½ acres of fairly productive land are needed to produce an adequate diet for one person. The quality and productiveness of food-producing lands vary greatly from one region to another. Only about one-fourth of the world's arable land is first-class and it is unequally distributed.

The influence of physical forces upon land use does not fit into any type of national pattern. This influence is reflected in the density and growth of population among the several nations.

Economic Determinants

Physical forces set the ultimate limits of food production but economic factors are fundamental in determining land use within these limits. Because national and international policies have not permitted the observance of essential economic determinants, the world's land resources are not now geared to providing adequate and healthful diets for all of the people. This indictment is doubly significant in light of the availability of modern methods of production, transporta-



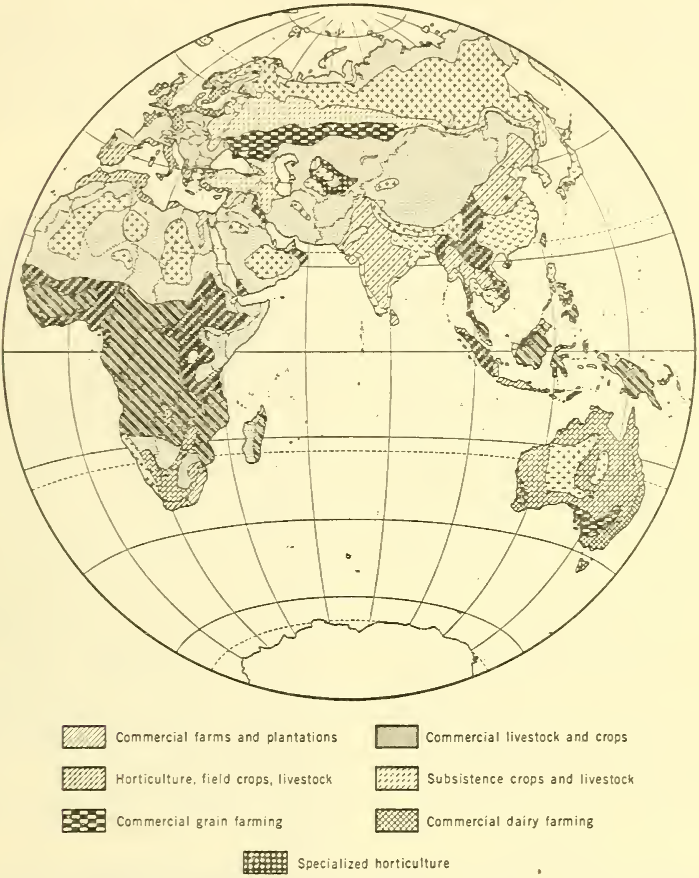
AGRICULTURAL REGIONS

Little or no agricultural land use
Nomadic herding
Ranching
Shifting cultivation
Rudimental sedentary cultivation
Intensive rice subsistence
Intensive grain subsistence

tion, storage, and marketing which would bring forth adequate food for all. In the Orient, famine still claims the lives of many people while national policies in other parts of the world may be regulating downward the production of food. Even in countries like the United States, where food is seemingly plentiful, many people remain underfed and many suffer from serious nutritional deficiencies.

Basic to organizing world land resources for adequate food production is a consideration of the demand for foodstuffs. We do not have an exact appraisal of the needs for particular foods. A start toward a good estimate was made at Hot Springs. Since then it has been

OF THE WORLD


Commercial farms and plantations
Commercial livestock and crops
Horticulture, field crops, livestock
Subsistence crops and livestock
Commercial grain farming
Commercial dairy farming
Specialized horticulture

estimated that if the United States, for instance, achieves the proposed dietary standards, our consumption will increase substantially. We will consume, in broad terms, 40 percent more milk or its equivalent and 70 percent more fruits and vegetables than in 1941—our last prewar year.

Considering world-wide dietary deficiencies, in kind and quantity of food, in terms of the Conference standards, the potential demand is tremendous. To satisfy this demand would bring new lands into use and would force a more intensive use of those already in cultivation.

In gearing food production to world demands it must be kept in mind that land productivity depends largely upon the amount of labor and capital expended upon it. When increasing total production, we must always make the choice of using additional areas or of using present food lands more intensively, or both.

Margins of Use

The margins of both extensive and intensive land use are determined according to the law of diminishing returns at that point at which an additional input of labor and capital fails to return an equivalent of product.

Because of the unequal distribution of land resources among nations we find people in heavily populated countries, like India and China, lavishing labor upon limited land areas with approximately subsistence or even starvation levels of production. In areas that are sparsely populated, like Australia, labor is used sparingly and land is used lavishly. Equalization of access to food products through world-trade arrangements would bring a better proportioning of land, labor, and capital with a greater net product out of the land for all.

Distance

Distance from market can construct as great a barrier to the use of land as can a harsh climate or poor soils. Distance helps to explain why rich farm lands in Alaska and Brazil, for example, have not been more fully developed.

As transportation improves in speed, quality, and cost probably distant lands will be brought within the range of markets. The wartime impetus given to the cargo plane, the transport truck, the ocean-going vessel, and the new methods of food processing and preservation will have a tremendous effect in overcoming distances and in bringing remote lands of the world into economical reach of the world's leading markets.

Comparative Costs

Production of foodstuffs should gravitate to those areas where they can be produced with the least cost. This is a common-sense rule of maximizing production with the least effort. The Hot Springs Conference recognized this principle when the representatives of the United Nations agreed that "The inherent, natural and economic advantages of any area should determine the farming systems adopted and the commodities produced in that area." One of the acid tests of the success of this and food conferences yet to be held, is the degree to which this principle is applied.

If the interchange of products were unimpeded by such obstacles as tariffs, embargoes, monopolies, and cartels, the entire world would benefit, for each country or area would be able to specialize in the product in which it can attain the lowest cost of production consistent with quality of product and an adequate level of living. If some areas are superior to others in the production of many products, the less productive areas should be permitted to produce the product that involves the least disadvantage. In this way each area throughout the world would tend to produce those products for which its ratio of advantage is greatest. In turn, each nation would import those products for which its ratio of disadvantage is greatest. Only by all nations working together and giving full recognition to these fundamental laws of land utilization can universal freedom from want of food ever be established.

Social Problems

The core of land-distribution problems, both among and within nations, is seeded with maladjustments in access to the use of products of the land. Struggle for possession and control of land resources has always been an influential cause of war among nations and revolution within nations.

Since control over land, frequently in the form of ownership, has in practice become almost tantamount to the enjoyment of the produce of land, individuals as well as nations without this control are in various degrees denied the use of land and its products. Among nations, these exclusions have taken the forms of immigration restrictions, tariffs, cartels, embargoes, and other restraints of international trade and migration. Within nations and their colonial possessions these exclusions have been molded into the law and custom of caste and race discriminations as well as in credit, marketing, freehold, leasehold, and laborer arrangements among citizens in the occupancy and use of land and its products.

Germany developed its lack of access to land resources into an argument for aggression. *Lebensraum* became the keynote of this argument. Italy used similar excuses for its conquests in Africa. Japan used them in regard to Manchuria. But at the same moment that the so-called have-not countries were crying for more land resources, they were frantically increasing their population through various kinds of birth incentives. Their past arguments were obviously spurious but they may serve as a warning of the dynamic character of land-resource maladjustments among nations.

Explosive

Of all the social issues from which wars and revolutions spring, few are more universal and explosive than those arising out of the use and control of land. Contrary to Marxian teaching, the world's revolutions have been bred and born in

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Motivations

Great acts grow out of great occasions and great occasions spring from great principles, working changes in society.

—William Hazlitt

rural peasant countries, not in highly industrial nations. The first revolution in Russia, the Mexican revolution, and the struggle of the Irish peasants are a few examples that substantiate this viewpoint. All of these disturbances grew directly from the land issue in rural countries. Even in the United States we probably came closest to internal strife, during the recent depression, in rural areas where some farmers flouted the law and intimidated judges to keep their homes and farms from being foreclosed.

Potentialities

The earth is still a potential Eden with adequate room and food resources for additional millions of people, if need be. Modern technology, transportation, and food processing have reached the stage where it is physically possible for adequate food to be made available to all of the world's present population. The main problem which confronts us is to work out ways and means for the realization of these potentials.

In achieving "food for all," the Food Conference recommended, as a first step, "that each nation undertake (a) to survey its land and water resources to determine (1) in what areas, if opened to settlement, production of food could materially be increased; (2) what areas, if supplied with additional production facilities, such as water supply for irrigation, improved drainage, or by the correction of deterrents to production, could materially increase their production of food; (3) the kind, extent, and economic possibility of developments necessary for this increase in food production."

Following the physical and economic determination of the areas throughout the world where the several foodstuffs may be produced under least disadvantage, if the represented nations are to reach their goals every effort must be made to facilitate the interchange of commodities among nations and between individuals within nations. Human nature as well as nature must be brought under rational control if food is to be available for all able and willing workers throughout the world. Motivation will be the provision for *access* to the products of the world's land resources among all peoples as these resources are and will remain unequally distributed and as food is essential to life itself.

Among nations, trade agreements, exchange systems, interchange of technical knowledge, and all possible means of international cooperation will further a better distribution of foods. The International Monetary Conference held at Bretton Woods is one step in this direction. Within nations, just tenure arrangements for those on the land and adequate employment conditions for those off the land, if geared to an economy of plenty of food and equal advantage for all, will send us toward the goal. The measures will not be easily achieved. Progress comes slowly; sometimes advance is discouragingly slow. But we must make sure our slow steps are in the right direction.

Land-resource problems will call for consideration and practical solutions at the coming conferences relating to the peace. For nations and people without access to the produce of the lands of the world would continue to constitute a latent and genuine threat to a lasting peace.

Population AND *Land Resource Relationships*

By CHARLES L. STEWART. *A little-known Polish formula for figuring these relationships may be refined for use in solving some post-victory problems.*

THE TIMES have brought a new focus of interest upon the balance between man and land. Mankind has too often multiplied where natural resources are narrow and unbalanced man-land ratios are still developing. Consequently, additional attempts may be made to win "living space" by force. For that and other reasons more foresighted attention should be directed to the complex relationships between the population and the land.

Basic to an understanding of this problem on its economic side is the development of better indicators of the existing man-land relationships. We may take as examples the man-land ratios of two countries. In England there are 1,090 persons (farmers and nonfarmers, rural and urban) per 1,000 acres of all land, and 65 farmers for the same area. In Norway, per 1,000 acres, there are 40 persons (farmers and nonfarmers) and 14 farmers. If the figures for farmers could be computed on a basis of full-time adult male workers, the gap between 65 for England and 14 for Norway would be narrowed.

There is need for getting away from averages that include land of all kinds. An acre is not merely a geometrical figure but a bundle of productive capacities of varying economic significance. Where an acre of land in one country or district is equivalent in value or in productive power to 5 acres in another country or district, that should be recognized in formulating indices of man-land relationship.

This problem was attacked on a many-nation basis by J. B. Goodson and Ellsworth Huntington at the International Congress of Geographers, 1938, and shortcomings of the methods tried out were reviewed in a contribution by C. J. Robertson, of the International Institute of Agriculture, to the League of Nations European Conference on Rural life, 1938.

In some respects one of the most original of the approaches to a rating of land in agro-forestal uses for specific practical purposes is what will be called here the "statistical acre." First given currency by W. Staniewicz, of Poland, it began to claim the attention of leaders of organized farmers in Continental Europe about 1936. As the proceedings of the International Confederation of Agriculture have not been published in English there has been delay in bringing knowledge of this statistical device to the United States.

Original Object

Before stating how the formula is worked and with what results in some cases, it is only fair to point out that the original object in developing it was to form better judgments as to how large a load of farm people certain tracts and types of land should carry. Problems of agricultural overpopulation were disturbing several countries and rural unemployment was causing concern.

There followed some excellent but little-noticed demonstrations of the use of the statistical acre as an aid in the better understanding of the relation of men to land. Staniewicz, Antoniewski, and Poniatowski, of Poland, Borel, of Switzerland, and others who joined in the use of the new statistical approach have worked out a tool that will probably have post-war uses in Europe and, with further refinements, in other countries.

How It Works

Under the statistical-acre approach ordinary plowland is rated at par, and lands in other farm and forest uses are rated either above or below par. An acre of forest land is 15 percent; permanent pasture, 20 percent; hay or meadow land, 40 percent; and an acre of garden land is three times an acre of plowland. To compute a rounded figure for a country or district, all plowland is counted at its regular number of acres; that is, ordinary plowland acres are statistical acres without change. To this are added for each type of other farm land, not the full acreage as a survey might show, but the number of statistical acres the Staniewicz formula yields. In Norway the total of statistical acres is only 7 percent as large as the total area of all kinds of land in the country, while in Hungary the corresponding percentage is 76, the highest for any European country.

Actually

What do we have here? At the least we have a consolidated expression of how farmers have found various tracts of land actually usable. The main types of land use indicate different degrees of labor and capital intensity. Of course, apart even from horticultural uses some plowland is more intensively used than other plowland. The same goes for some hay land or land in any other kind of agro-forestal use.

In other words, there is still plenty of crudeness left in any use-weighted rating plan that is as simple as this. Nevertheless, it takes a step toward recognizing the fact that, apart from market prices for land and apart from yields of products from land, something may be gained by noting the varying power of land to induce farmers to devote it to the uses which their economic sense dictates.

Polish economists have differed among themselves as to whether 15 or 20 farm persons per 100 statistical acres represented a saturation point for their country before the war. They were in agreement that the formula used for getting away from unweighted areas was at least provisionally helpful. The present writer does not claim more for it.

Thus far we have applied this land-rating plan to get a rough index of the farming usability of land. It is possible also to substitute statistical acres for total acres in agro-forestal uses in the usual type of man-land indices.

Revised Picture

For example, in most of Europe west of Russia, about 20 acres of land in all agro-forestal uses have been assumed to be available to each person employed in agriculture, but this becomes 10 when expressed as statistical or plowland acres.

In Finland, Sweden, and Norway, where figures are relatively high (for Europe) on either basis, the index is from one-fourth to one-fifth as high when reduced to statistical acres as when unweighted. In Roumania and Yugoslavia, where the figures are relatively low on both bases, the index is cut to about half. In Finland, the area of land in all agro-forestal uses per farm-occupied person is 17 statistical acres, as compared with 79 unweighted acres; in Roumania and Yugoslavia, 2 compared with 4 acres. Thus, instead of showing the Finnish farmer with 20 times the acreage of the farmer of Roumania and Yugoslavia, the new basis shows him with between 8 and 9 times as much.

Trials

Europe west of Russia has diversity not only among countries as a whole but among the districts of each. The balance between farming personnel and farm-land resources is more regular than the old-style unweighted indices would suggest. The formula, when applied to all Russia (Siberia as well as European Russia) shows 15 statistical acres per farm-occupied person, compared with 50 unweighted acres in agro-forestal uses. When the formula is considered for use outside of Europe and Siberia, an examination of statistical reports shows that only seven countries have published their facts in such a form that they can soundly be given even a trial use. These are Japan, Chile, Australia, New Zealand, Canada, Mexico, and the United States.

Commonalty

What was once for the few must now be for the many.

—MARK VAN DOREN

In Japan a high percentage of the land is in agro-forestal uses. Japan's percentage before the conquest, 85, is to be compared with 62 in New Zealand, 54 in Mexico, 51 in the United States (farm woodland being the only forest land included in our census), 31 in Australia, 26 in Chile, and 7 in Canada. Japan's percentage of land in agro-forestal uses, 85, is slightly less than that of Finland (90), Germany (89), and Denmark (86), and only slightly above that of Italy (83), Belgium (80), Spain (78), and France (77).

Plowland (statistical) per farm-occupied person in Japan is 2.3 acres, as compared with 5.3 acres of agro-forestal land, unweighted. The average farm-occupied person in Japan, therefore, has about a fourth as much land (plowland basis) as the average European west of Russia.

Japan falls below all European countries except Yugoslavia, in terms of statistical acres, but would outrate not only Yugoslavia, but also Bulgaria and Roumania, if the index counted all land in agro-forestal uses alike. Comparable statistics have not been made available for other countries of Asia.

Mexico and Chile are the only Latin-American countries for which usable statistics are found. Chile, with 27 plowland (statistical) acres per farm-occupied person, has a figure nearly three times, and Mexico, with 17, has an amount nearly twice that of Europe west of Russia.

The number of plowland (statistical) acres per farm-occupied person is largest in Canada (58) and next largest in New Zealand (52). Next come the United States (44) and Australia (42). These figures run from four to six times as high as in Europe west of Russia.

Differences

The index used in this article is statistical acres per farm-occupied person. It differs in three respects from the index employed in another article in this issue of Land Policy Review. Farm-occupied persons are not identical with the agrarian population. All people in the agrarian population are not "active" in their contribution to agro-forestal enterprises—some are too young, some too old, others not field and barn workers.

On the other end of the equation, the acres used are generally not weighted to a plowland basis but

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Answer

In these great moments ours is really a peoples' war. No American soldiers, on the European continent need ask, "what are we fighting for?" He knows, because he sees, in the frantic jubilation of the people, that he, GI Joe, is the courier of happiness, freedom, and hope, the breaker of shackles, the avenger of insult and humiliation, the restorer of faith, the liberator of mankind. . . . We march together, every Ally doing his task, as it was prepared, each according to his means, every day bringing each a triumph, and all sharing it, with new Allies springing out of the very ground, wherever our soldiers tread.

—Dorothy Thompson
The Bell Syndicate, Inc

taken without weights, or, if land in some agro-forestal uses is omitted, that which is retained is in some specified plowland uses, as when devoted to certain kinds of field crops.

A third difference lies in the way the relationship is expressed. If there are 10 persons per hundred acres, one can also say there are 10 acres per person. The tendency in this article is to standardize on the number of acres (statistical) per farm-occupied person. Thus, there has been an effort to refine the figures at each end of the ratio and make the final expression one, not of persons per unit of area, but of units of area per person. For certain purposes, it would be just as logical to reverse the latter practice.

Heavy emphasis shown here on the farm-occupied person as the unit of reference is a reason for desiring better statistics on the farm-occupied population than most countries have provided.

Limitations

When the Staniewicz formula is applied outside of its original reference area there is need for enlargement and adjustment. Shall cropland reported in ex-European countries as idle, fallow, and failure be counted as plowland? In the provisional figuring reported here it was counted as 40 percent. As woodland is operated much less intensively outside of Europe, a woodland acre is counted as 7½ percent of a plowland acre, rather than as 15 percent as Staniewicz provided.

Farm-economic areas of at least three grades are suggested by these samples. Japan and certain countries of southeast Europe show extremely small plowlands per farm-occupied person. Canada, the United States, Australia, and New Zealand show extremely large amounts. Chile, Mexico, and some countries of western Europe occupy upper medium positions and other countries of Europe lower medium positions.

In countries of high mechanization of field and barn operations plowland may absorb relatively little labor time per acre in relation to the labor time per acre devoted in other countries to pasture or hay. The writer makes no claim for the universal validity of the original ratios. When tried out as between farming-type areas and counties of a single state some incongruous results at times confront the statistician who tries to bring over the Polish formula intact.

Observations

In the first place, it is desirable to have a basis for comparing continental or other regional situations. Accuracy is as essential in a telescope as in a microscope but to a different end. There is need for a developed index of land situations taken in the large.

The second observation is that plowland, although not the same overseas from Europe as in Europe or behind one tariff wall as behind another, tends to be more fully in competition and to be closer to other plowland in its capacity to serve local and world markets as time progresses. Technological improvements in overland transportation are an example of one type of influence in this direction. Cheap water transport unites overseas land areas in the economic sense. Holding to plowland as a kind of datum line, whether in Australia, in Japan, or in some country with a land situation known to fall in between, may be even more warranted if international economic collaboration becomes more thoroughly established.

The above is stated on the assumption that it may be practicable in the near future to apply census methods to obtain world data on the use of land. More detailed ratings than a census gives should be made in all countries for land in each of the major use classes, utilizing experience already had in some countries. Standards for detailed ratings of plowland or land in other use classes throughout an area as large as Europe west of Russia or mainland United States have been difficult to make acceptable. The movement toward detailed ratings, although it may logically follow the more over-all approach here described, should neither impede nor be impeded by the less detailed approach.

The amount of plowland and plowland equivalent per farm-occupied person has meaning to local people in all areas except those devoted exclusively to pastoral or timber operations. For it to be implied that plowland is plowland wherever found is not strictly accurate, of course, but it would be hard to find a more understandable base concept.

Coming Necessity

As the war comes to a close there will be need for more information about the world's land, about its quantities and especially its qualities, and about the way it stands in relation to its users.

For the better understanding of how land resources and the farming population are balanced in country after country, the collection of sound statistics on land use is a proposed need. The United Nations Food and Agricultural Organization may make possible a third world agricultural census, which, in land-use statistics, will be better than the pioneering efforts.

In the next few decades a critical question will be whether a moderated rate of population growth will come about in countries which have had a tendency to overpopulate in relation to their natural resources. Will the next century see man-land ratios as revealed by adequately refined indexes moving away from the extremely small and the extremely large figures now characteristic of important groups of countries?

Open Door

In international economic collaboration looking to reduction of strains in the world structure an eye kept on the shifts in man-land ratios can be helpful. To that end much use can be made of comprehensive census data taken at comparable dates. The results should be used with well-considered weightings so as to obtain indicators of significant man-land relationships. To the refinement of these indices the Staniewicz formula has opened a door.

Preparation

What is past is prologue.

—Shakespeare

Food for First Aid

By ROY F. HENDRICKSON. *Recently returned from visits to Europe and the meeting of the UNRRA Council at Montreal, the Deputy Director General of UNRRA was asked to outline what the food relief needs would be during liberation and just after the war.*

EVERYONE in the United States today who reads the papers, looks at the picture magazines, or goes to the movies knows there is a food relief problem across the ocean—no matter which ocean you face. Most people are deeply concerned over the want and distress of the human beings who have suffered through 4 or 5 years of total war and total occupation. Everyone believes these victims of enemy occupation, these allies of ours, should be helped. Almost everyone wonders if the job can be done.

First of all, 44 allied nations have pledged themselves to share in the job, and have signed the international agreement which set up the United Nations Relief and Rehabilitation Administration—or UNRRA—as their operating agency for this purpose.

No one country is expected to provide all the supplies. In addition to food the occupied peoples will need clothing, medical supplies, and equipment for agricultural and industrial rehabilitation — machinery repairs, seeds, fertilizer, tools, and many of the simple necessities. These supplies must be produced in many countries, the task shared by many. The supplies that are scarce must be allocated among the liberated countries according to relative need.

When UNRRA was set up, the united and associated Nations that had not been occupied by the Nazis agreed to give 1 percent of their national income for use in relief and rehabilitation in liberated areas. In this country the 1 percent comes to $1,350,000,000. That happens to be the amount this country spends for each 5 days of war. Congress has passed an act authorizing that amount to be appropriated and it has appropriated $800,000,000 for the purpose to date.

Many here ask, "How much food will it take?" In some ways that's a little like asking, "How long is a rope?" The element of doubt hinges, of course, on the lack of absolute knowledge of what conditions will be when the Nazis are driven out—how much food they will take out of the country and how much scorching they will have time to do; and later, what the Japanese will do in Burma, China, the Philippines, and other points east.

Careful estimates have been made of the requirements of each liberated, or about-to-be-liberated, area.

No threat of torture and death at Nazi hands could entirely silence the occupied peoples of Europe—they never admitted defeat, always kept alive the dream of liberation and planned for it. At tremendous risk, they succeeded in getting information out to their governments-in-exile about what conditions actually were. These estimates of requirements are flexible, since they are keyed to various sets of assumptions. They can, in the light of actual conditions, be adjusted up or down. During the last few months I have talked in detail with representatives of these Governments, both in Washington and in London, about the situation likely to be met. Here are some of the truths which are emerging.

Emerging Truths

To begin with, the situation is very uneven. Hitler had to keep the agricultural machine going because he had to keep his vast war machine fed. He had to make up for raw materials once imported but now kept out by the sea blockade. Occupied Europe was forced into a relative self-sufficiency, and this meant that detailed attention had to be given to the agricultural program and to the distribution of food.

For the most part, the dairy herds of Western Europe have not been reduced beyond early repair. Production per cow was cut, but can be revived fairly rapidly if feeding stuffs can be imported. This appears to be possible but very difficult because of limited shipping in the early stages. It is unlikely that any overseas importation of livestock will be necessary.

In Denmark and Holland—highly important dairy-export countries before the war—cow numbers stand at above 70 percent of pre-war. Norway is reported to have more than 90 percent of its cow numbers. France is said actually to have increased the numbers of cows and heifers. Belgium has been hard hit because before the war it had to import half of its food. With imports cut off and with a very heavy population load to carry, Belgium had to plow up pasture land to make room for direct-consumption crops and this in turn reduced the size of the dairy herds sharply.

In areas of Eastern Europe, where much of the agriculture is at a subsistence level, the loss of a cow was a major tragedy. A farmer made every sacrifice to save his animals. The peasant, if not scientific, was always thrifty because he had to be, and now with the very lives of his family dependent on the food he raised, he shepherded every smallest resource.

Dominant Deficiency

The greatest blow to maintenance of dairy herds was the loss of protein feeds. Much of this in Europe came normally from the crushing plants which imported vast tonnages of oilseeds to help make up for Europe's inability to produce the fats and oils needed in normal times. Hitler helped some to offset wartime losses of oilseeds and lard by greatly increasing the production of sunflower seed and rape seed, but the shortage of fats is the Number 1 food deficiency in Europe now.

Hitler increased the production of potatoes; in fact, potatoes became more than ever the staff of life in many occupied areas. It is estimated that per capita consumption exceeded 200 pounds per year in every country outside of Southern Europe, reaching as high as 300 pounds and more in Norway and Poland. The lowly spud, eaten skin and all, contains many valuable minerals and vitamins—even the precious vitamin C so hard to get when no fresh fruit is to be had. But with little fat to cook them in, potatoes in excess quantities can become mighty dull to the palate.

Score Sheet

On the whole, agricultural Europe has had pretty good crop weather. Moreover, in swift mechanized warfare where armies covered many miles a day, there was often not much destruction off the highway. Farm buildings and equipment are not often military objectives—they are casualties of war only when they happen to be in the way of an intensive phase of war. I am not forgetting the areas where fighting was bitterest and the Nazis took deliberate revenge by burning and laying waste the land, nor am I overlooking the areas around cities that went through a blighting period of siege. Those are the blackest spots. They must not be overlooked or underestimated. But they are no more typical of the whole picture than are the abundant acres of Normandy on the other side of the score sheet.

Basic Needs

The five basic relief import food needs in Europe are fats and oils, animal proteins, wheat, sugar, and processed milk. The supply situation on wheat and other cereals is good, with the world supply large. The shortage in animal proteins can be alleviated in part by adequate supplies of vegetable proteins—chiefly dried beans and peas. Europe's chronic shortage in production of fats and oils is going to be hard to meet. Full advantage will have to be taken of every temporary and seasonal surplus in the supplying countries before the pinch in these commodities can be eased.

Decisions

Social order itself requires laws and rules, but in a democratic society these commands are expressions of popular opinions matured into decisions and accepted in the light of such reason as we can command.

—Charles A. Beard

Military First

From the beginning of UNRRA, it was decided that the Military should have full planning and supply responsibility in a newly liberated area for approximately 6 months. After that, if the Government in control wished it, UNRRA would go in to help with the relief job. Food for the first needs will thus come from Army stockpiles, and UNRRA will have some advance notice of what to expect. Where the agriculture has been insufficient from the start, exceptional distress results from enemy occupation, as was the case with Greece.

Greece is a small country where the soil is poor and overpopulation places great pressure on the land. Greece was a long way from raising enough food for its own needs even before the war, and it had accumulated no large stockpiles to help meet the dreadful emergencies it was to face. Starvation was more than a threat when, in August 1942, neutral relief agencies began monthly shipments of wheat, dried peas and beans, soup powder, fish products, and some rice and sugar from Canada and the United States.

Starvation Averted

Italy was not much better off when the allies entered. It, too, had large urban populations to be fed when supply lines were destroyed and distribution broke down. Grain shipments from the North were blocked, docks and railroads were blown up by the retreating Nazis. Moreover political problems peculiar to Italy have greatly complicated the actual administrative difficulties of distributing food supplies fairly. The military authorities had to depend on local help in doing the job, but many Italians after years of fascism did not know whether the Allies were there to stay and so they could not be depended upon to enforce the rules of rationing and price control.

One observer back from Naples said that trying to control prices and rationing of food was like hitching two kittens to the front fenders of an automobile mired to the hub in black gumbo. The answer, of course, was to send in more food, and as panic and the fear of starvation lessened, lawlessness declined. The situation, although still far from perfect, is at least improving as order is restored and supply lines are opened.

Generally speaking, UNRRA will not be responsible for supplies to ex-enemy areas. An exception is to be made in Italy, where it is authorized to expend not to exceed $50,000,000 for supplemental programs of assistance to civilians. This was authorized at the second session of the UNRRA Council at its September meeting in Montreal. The supplemental food program, over and above that which the military supplies, will be to assist children and nursing and expectant mothers, in particular.

City vs. Country

Probably we can expect conditions similar to those found in parts of Italy in each large industrial city where the destruction of railroads and harbors has temporarily kept food supplies from moving in from agricultural areas. When our troops got into Normandy everyone was surprised at the abundance of food in the villages and countryside. In Paris, however, there was scarcity and again the authorities were up

Spur

One thorn of experience is worth a whole wilderness of warning.

—LOWELL

against the black market with its attendant evil of food for the well-off and famine for the poor. In the first days of liberation the Military moved in 1,500 tons of food daily by airplane and truck. Paris is still living on a day-to-day basis, but the outlook brightens as railroads are repaired and transportation facilities are increased. Looking farther ahead, France's position on food should improve rather rapidly since it will be able to import some food and much needed fertilizer from its North African and other colonies.

Job of UNRRA

The task of food relief must always be measured in terms of what conditions were in peacetime. UNRRA's job is emergency relief. It was organized to help the people in liberated areas over the first high peaks of distress, so that they may be strengthened enough to help themselves. UNRRA is not expected to go in for long-term reconstruction, nor can it correct ills and weaknesses inherent in the agricultural and social system long before the war started.

Thus, in fixing our sights we must take into account our own budgetary limitations. We must keep firmly in mind the global picture with regard to food before the war multiplied hunger and want.

Shadow of Famine

Never since the beginning of history has there been enough food. The Bible is full of stories of famine. The people of China and India have always lived in its shadow. It has been estimated that two-thirds of the working people in the world are producers of food. Since the results have never been adequate, this figure is hard to believe until we consider that about half the people in the world live in China, India, and the other Asiatic countries. In many parts of India the diet standard is so low that the life expectancy is only 30 years.

Now let us look at the Balkans, in the light of some revealing figures published by the Royal Institute of International Affairs in London. European experts have calculated that an area raising grain, plus some potatoes and livestock, is overpopulated if more than from 25 to 28 persons live on each 100 acres of land. This figure was based on production averages for wheat, rye, maize, and potatoes in the Balkans for the 1933–37 period. Here are the agrarian population figures per 100 acres of farmland: Poland 31, Czechoslovakia 24, Hungary 24, Roumania 30, Yugoslavia 42, Bulgaria 33, and Greece 48.

Contrast these figures with 6 agrarians per 100 acres for Great Britain; and 18 only for Germany—in spite of all its cries for *Lebensraum*. Moreover, Great Britain and Germany surpassed the Balkan countries in production of the four commodities listed. The Balkans were loaded with an excess agrarian population of 18 million people, and this inevitably meant a low standard of living even in normal times.

Relief Figures

These figures have a direct bearing on the problem of food for relief. After careful calculation, the member nations of UNRRA have agreed to a relief standard of from 2,000 to 2,650 calories a day. That would seem scanty fare to a farm family in our Midwest; it is not quite so scanty to the peasant of Eastern Europe who has had to content himself for generations with a meager and sometimes painfully inadequate diet. Because of shortages of fats and sugar the relief diet will be restricted; but it will seek to contain an adequate supply of calories and there will probably be marked improvement in the quality of diet to which Eastern Europe has been forced to adjust during the war, especially in Poland and Greece where suffering has been so great.

Sources of Relief

In the United States the impact of relief needs on available food supplies is difficult to appraise. The period of UNRRA's operations in a given territory should not be longer than 9 to 12 months. This should come at a time when requirements for the military and for Lend-Lease are dropping off sharply.

Perhaps one-fourth of relief food requirements will take the form of wheat. Wheat is in abundant supply in this country, Canada, Australia, and the Argentine. The thought that all the surpluses which this country can produce will be needed for relief cannot be supported. The relief quantity will be substantial, with probably one-half of it going to nations which intend to pay for their commodities. The impact of the relief needs, coming at a time of reduction in the needs of the military and Lend-Lease may be further softened if there is a decline in civilian food buying when the peak of war work passes.

Strong Support

The relief problem will not be an easy one. Among its most significant features will be whether international teamwork, tried in this field on this scale for the first time, can succeed. The strong support now provided by many nations predicts that it can.

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Foundation Stone

The principle of sovereign equality of all peace-loving states, irrespective of size and strength, as partners in a future system of general security will be the foundation stone upon which the future international organization will be constructed.

—Cordell Hull

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LONG-TIME FOREIGN TRADE:
Agricultural Prospects

By JAMES G. MADDOX. *Prognostications here are naturally hedged with conditions and assumptions but they leave us with a few salty truths to ponder.*

WHAT are the prospects for an expanded export market for agricultural products in the post-war years? Is the farmer in this country likely to find a strong demand for his commodities in foreign nations? Or must he face a post-war world in which few farm products can be sold abroad? The answers to these questions cannot be given with certainty, but there are some points in connection with them about which we can be fairly definite.

For instance, it seems apparent that if we are to sell large quantities of agricultural products abroad, the people of other nations must not only want to buy them, but also be able to buy them from us as cheaply as they can from producers in other countries; and they must have the money with which to pay for them, unless we are willing to give them away.

In general, there can be little doubt about foreign people continuing to need many of our farm products. But there is a serious question as to whether they can buy them from us as cheaply as from other nations, and whether they will have the dollars to pay for them.

Both of these problems—the price at which we are willing to sell and the supply of dollars the foreigner will have with which he can buy our products—are largely within our own control. We cannot only determine our own selling prices, but we can do much in determining the supply of dollars the foreign buyers will have. One important way in which we can increase the foreigner's supply of dollars is for us to buy more of his commodities. Some of the other ways are mentioned later. The important thing for us in the United States to recognize is that what we do ourselves will be the major factor determining whether we shall have large or small export markets for our commodities.

Before indicating some of the things we might do to expand our export trade in the post-war years, we take a look at some of the trends and relationships of the past.

One relationship of the past is clear. *When this country is prosperous, our volume of foreign trade is high.* Both our imports and exports have been closely related to the degree of prosperity here at home. For instance, our merchandise imports and exports were cut almost in half by the depression of 1920 to 1922. They picked up some during the remainder of the 1920's, and reached new high peaks in 1929. With the onslaught of the depression in the early 1930's, our imports and exports again took a tumble, but as the situation in this country improved, our foreign trade became larger. Both imports and exports reached their highest points, during the decade of the thirties, in the year 1937, which was the most prosperous year of that decade. With the coming of the second World War, our exports increased rapidly. Imports have also risen, but not so greatly as exports.

When Prosperous

What is the explanation of this past relationship? Why is it that our volume of imports and exports is high when our domestic economy is prosperous? Only a few of the major points can be mentioned.

When our economy is operating at high levels of production, we buy from foreigners large quantities of raw materials to be processed, manufactured, and distributed in this country; we pay foreign owners of ships substantial freight bills for hauling our imports and exports; many of our citizens travel abroad; and our bankers lend money to foreign firms and governments. All of these activities supply people in other countries with dollars. These dollars, in turn, create an effective foreign demand for our export products.

When Depressed

On the other hand, when our level of economic activity is low in this country, we reduce our purchases from foreigners, we have lower freight bills to pay to foreign ship owners, we travel abroad less, and we reduce or eliminate new foreign loans. All of this has the effect of reducing the supply of dollars in the hands of foreigners. They have to have dollars in order to buy our exports, and if we lower the amount of dollars we pay them for their goods and services, they are forced to reduce their purchases of our goods and services.

Two-way Trade

Foreign trade, just like domestic trade, is a two-way proposition. A farmer can't sell eggs or butter or wheat or cotton to a city man in this country unless the city man has money with which to buy. Neither can we sell our farm or industrial products to people in other countries unless they have the money with which to buy. They can't manufacture our money. To get it, they must trade us something, either goods or services, for it.

When we are prosperous we buy more from abroad than when we are not prosperous and thus send more dollars there. This obvious fact alone suggests how very important it may be in the post-war years for us to maintain a high level of domestic activity in this country, so we can have a large volume of export trade.

Another relationship of the past is also apparent, and it is of special significance to farmers. *During the whole inter-war period there was a generally downward trend in agricultural exports.* In 1920, even though our total exports increased, our agricultural exports started a decline which continued with only minor recoveries clear through the next two decades. Just before our entry into the present war the annual value of our agricultural exports was less than it was at the beginning of this century. During the 5-year period 1925–29, the annual value of agricultural exports was equivalent to 38 percent of the average value of all exports. Ten years later, by 1935–39, it had declined to 26 percent. Clearly, the farmer in the United States was rapidly losing his foreign market.

Why was this true? Why should the farmer lose his foreign market to a much greater extent than the industrialist during the two decades following the first World War? A few of the important reasons can be outlined here.

For many years our country has been developing more and more as an industrial country. An increasing proportion of the goods we have to sell, both at home and abroad, are nonagricultural. But this is not the whole story. During much of the inter-war period, and particularly in the decade of the 1930's, some of our farm prices were not really at competitive levels in world markets. Foreign buyers often found that they could buy farm products from producers in other countries cheaper than they could buy them here.

Contrasts

Closely associated with this price situation is another condition that may have been even more influential. Our imports from foreign countries were small, particularly in the decade of the 1930's, so foreigners had just that many fewer dollars with which to buy our products. With their limited supply of dollars, they found it more advantageous to buy our farm machinery, automobiles, typewriters, electrical equipment, machine tools, and similar manufactured products. In many lines of industrial production we make the best products, for sale at the lowest prices, that can be found anywhere in the world. In other words, the foreigner cannot find a cheaper substitute for our highly standardized, mass-produced industrial products. He can buy farm commodities from several other countries which, in general, are just as good as ours.

Then, too, certain countries, particularly Germany and Italy, chose to produce more of their agricultural products at home even if the cost was greater than that at which they could buy them from abroad. England gave certain trade preferences to its Dominions which put their farmers in a superior position to ours in the export market.

Paramount

Although many other factors may have operated, the effects of our tariff increases and our severe depression of the 1930's in reducing our imports from abroad, and thus reducing the foreigner's supply of dollars, were probably paramount. With this short supply of dollars, our foreign customers bought our high quality, low-cost manufactured products, and turned to countries other than the United States for agricultural products.

What to Expect?

This review of the past situation affords a basis for discussing what the future may hold in store. As soon as ocean shipping becomes available, it is reasonable to expect that the foreign demand for our agricultural products will be fairly strong for 2 or 3 years, provided our prices are in line with those of our competitors. Foreigners have built up substantial supplies of dollars in this country, during the war, with which they can buy our goods. Although there is little precise information about how badly war-torn Europe is in need of wheat, cotton, pork, lard, and fruits, it is probable that the foreign demand, plus the relief supplies provided by UNRRA, will provide fairly substantial outlets for farm products from the United States. But how about the long-time outlook? After the war and transition periods are over, what can we expect?

If

If we have full employment in this country, and if we put our prices down to competitive world levels—two big and important ifs—it would be reasonable to estimate from past relationships that our total merchandise exports in the post-war years might average approximately 6 billion dollars per year. This compares with annual average exports of 4.8 billion dollars in 1925–29, and about 3 billion dollars in 1935–39. If the downward trend in the proportion of agricultural exports should continue, and there are some reasons for believing that it will, about one-fifth of our total exports, or about 1¼ billion dollars worth, might be expected to be agricultural products. This figure of 1¼ billion dollars compares with annual average agricultural exports of about 1.9 billion dollars in the 1925–29 period, and approximately three-fourths of a billion per year during 1935–39.

If our agricultural exports approximate this estimate of a billion dollars annually, we might expect to sell 3.5 to 4.5 million bales of cotton, 75 to 100 million bushels of wheat, 450 to 550 million pounds of tobacco, 3 to 4 billion pounds of fruit, 600 to 700 million pounds of fats and oils (mainly lard), and fairly substantial quantities of several other farm products.

Compare

It is probable that the bill of goods making up the total volume of agricultural exports would represent the production of roughly 16 to 18 million acres of average cropland. This is equivalent to the cropland on about 300,000 farms. It compares with approximately 30 to 35 million acres used to produce commercial and lend-lease exports during the last year or two.

But—

That our volume of agricultural exports will approximate a billion dollars a year in the post-war period is by no means assured. If we do not maintain full employment in this country, or if our farm products are not priced at levels competitive with those of other countries such a volume of exports could not be expected. Exports could easily slip back to the depression levels of the 1930's.

But it would be reasonable to expect that both our total exports and our agricultural exports would be substantially larger than these projections, if we maintain full employment at home and collaborate with the other nations of the world in truly significant international programs. These programs would have to have potent aims—to reduce tariffs and trade barriers; to stabilize currencies; to lend capital to the undeveloped countries of the world; to organize the political, military, economic, and cultural relations among nations so as to prevent the constant threat and fear of war; and to provide, through international agreement, for the distribution of temporary market surpluses of food and clothing to the poverty-stricken peoples of Asia at prices lower than those prevailing in world markets. If most or all of these things are done, our farmers will gain in commerce.

As Never Before

To a much greater extent than ever before in the history of the world, the determination of the future of our foreign trade is in our own hands. We can draw into our national shell, reduce our production and our level of living, set our own price levels, and trade with other countries as little as possible. At the other extreme, through export subsidies, exchange control, bilateral commodity agreements, governmental barter, rigorously conditioned foreign loans, and the effective use of "diplomacy backed up by armed force," we can set out to undercut all competitors and take a lion's share of the market without regard to the effects on other nations. The former alternative we followed to a considerable extent during the inter-war period. The latter is the course pursued by Germany. They both contributed to the present war.

A third choice which is freely open to us is to produce efficiently, sell in an open and competitive way, and lend our financial and political strength, in full cooperation and collaboration, toward expanding total world trade and production. Along this route lies the possibility of prolonged peace and rising levels of living and satisfaction here at home and among our foreign customers.

Old Proverbs for *New Soldiers*

Every land is his native land to a brave man.

To a lucky man every land is his fatherland.

Books

Democracy Reborn. By *HENRY A. WALLACE.* Selected from public papers and edited, with an introduction and notes, by *RUSSELL LORD.* Reynal and Hitchcock. New York. 280 pages.

RUSSELL LORD here presents his own selections from the speeches and writings of Henry A. Wallace, from March 1933 to May 1944. It is a complete record of the Vice President's position on many important issues of the time. The work was done on compiler's initiative, and although Mr. Wallace cooperated in the production and answered all questions, this is not an "authorized work." Mr. Lord says, with a frankness characteristic of both the Vice President and himself, that the book contains only what they call "full-baked" addresses and statements found in the numerous manuscripts both complete and fragmentary from which this volume was drawn.

When Mr. Wallace came from Iowa to become Secretary of Agriculture on March 4, 1933, he had had little administrative experience. He was soon recognized as a capable administrator who combined an ability to carry on these arduous duties with a talent for popular interpretation. Having been an editor, he took on naturally the task of meeting the press and there soon poured forth from his office a large volume of versatile writing and speaking that caught the attention of people everywhere. Henry A. Wallace has thus become a notable educator, and has made a profound impression upon the American people—including many who do not like most of his ideas.

MR. WALLACE was not only a Secretary of Agriculture who recognized the importance of an educational basis for good administration. He was also a member of a Cabinet of a liberal crisis government that engaged in wide experimentation and social planning. Thus social action became a far more important function of the Department of Agriculture than it had ever been before: social action on a grand scale took its place along with the older functions of research, regulation, and education.

Mr. Wallace's effectiveness as an educator of adults may be explained in large part by his zeal in social and economic action. Over and over again the papers in this book have to do with a particular program that is being launched or modified or defended. Mr. Lord supplies crisp text between manuscripts that gives the setting for the articles and speeches and much additional information. He records, for example, that the Secretary of Agriculture between March 4, 1933, and New Year's, 1934, made 32 scheduled public pronouncements. The first address of his public career was a radio talk on March 10, 1933, when he announced the main outlines of the agricultural adjustment program which had been worked out in a special conference.

FIRST in the book come several declarations made by the Vice President in the early months of 1944—*What America Wants, What America Can Have, America Can Get It.* Then the other papers are given in chronological order. In all, there are 55 headings in the table of contents. Under some of these headings in the text are numerous excerpts from various writings, as well as the full texts of the more important statements.

One finds, of course, the speech given in 1942 before the Free World Association in New York—*The Price of Free World Victory*—with its exposition of the people's revolution and the affirmation of the century of the common man. "The people are on the march toward even fuller freedom than the most fortunate peoples of the earth have hitherto enjoyed." Also well represented are Mr. Wallace's ringing defenses of the national farm policy and program, for example, *The Cotton Plow-Up,* and *Pigs and Pig Iron*: these reveal Mr. Wallace's ability as a campaigner.

THESE WRITINGS are the work of a man who can draw on treasure houses of knowledge. There is a talk before a seminar in economics at Ames, several expositions of the idea of an Ever-Normal Granary, reflections on capitalism, technology, corporations, statesmanship, and religion. Mr. Wallace knows more, probably much more, about the Hebrew prophets than do most clergymen. He can exhort, as well as discuss economics or genetics.

In these pages Mr. Wallace is a teacher of land conservation, wherever found, and an advocate of cultural and economic collaboration with other nations. He is an anti-fascist pamphleteer, and a careful student of the Papal Encyclicals. He is a critical student of social institutions, but he is also engaged in a search for what is in the heart of man. One of the important speeches is on books of power.

THIS IMPRESSIVE production varies, of course, in literary quality. Mr. Wallace has had to work too fast to round all of the papers out or to polish them all off. But at times a rough style can be an asset. Mr. Wallace is a writer of power, a statesman who deals with great thoughts and who has skill in communicating them. Finally, he is a writer who has great courage.

Russell Lord's own skill as writer and editor considerably enhances the value of the book. He contributes an introduction that tells much about the Wallaces of Iowa, and much about "Young Henry's" entire life and work. He tells us a full-length biography of the Wallaces is coming later. He writes this introduction from the University of Georgia. He has written from various places and at various times but always he has written about agriculture and its people.

—*Benson Y. Landis*

Like master, like land.

The Economics of Demobilization. By *E. JAY HOWENSTINE, Jr.* Introduction by Dr. *ALVIN H. HANSEN.* American Council on Public Affairs. Washington, D. C. 336 pages. (Bibliography.)

HERE AND THERE attempts have been made to bring to the fore the demobilization experience of World War I. Most of these studies deal with specific fields and they have not had general circulation. Howenstine's book on *The Economics of Demobilization* is therefore welcome. It covers a wide range of economic problems faced during World War I and the steps taken to shift from war to peace production; it draws contrasts between the situation in 1944 and that of 1918, and lays down a blueprint for demobilization, that we may avoid the pattern of economic events that has characterized our economy after each of our major wars—in 1812, 1864, and 1918—a pattern that consisted of a brief period of hesitation and some unemployment, followed by a speculative boom and then a major depression.

If November 1944 is taken as equivalent to November 1918, there is now a great deal more planning than we had then. The post-war committees of the House and Senate, and the attention that has been given to reconversion problems by the WPB, by OPA, by the Armed Services, by the nonwar agencies, and the present Office of War Mobilization and Reconversion represent distinct gains in foresight. This does not mean that the battle for a smooth reconversion from high-level war production employment and income to the equivalent peacetime levels has been won. Bearing in mind the unanswered questions in all reconversion and post-war discussions, it is enlightening to read Howenstine's brief chapters pointing out the reliance placed by the 1918–19 Administration on "Natural Forces" (today, private enterprise), on the conflicting views of the Federal Reserve Board and the Treasury on fiscal policy; on the conflicting views as to wage and price policies held within the Administration, and on the general lack of coordination of the many parts of the reconversion process.

PARALLELS are striking. They should be more generally known by members of Congress, by Government agencies, and the many outside of Washington. Howenstine lists several 1918–19 readjustment inadequacies. We had then no adequate appropriation for public works as part assurance of employment, no provisions for an automatic reduction of inflated prices and living costs, no full appreciation of the utility of the United States Employment Service, no way of reconciling numerous conflicting policies. These conflicts included:

(1) Rediscounting policy of the Federal Reserve Board making for expansion and speculation while the Treasury was promoting a savings program.

(2) Speedy removal of restrictions of farm output and efforts to deal with restrictive practices in other industries.

(3) The antimonopoly policy of President Wilson and the Department of Justice while the Department of Commerce and its Industrial Policy Committee were pressing for market agreements.

Limits

The future is a world limited by ourselves.

—Maeterlinck

(4) The policy of the Department of Commerce and its Industrial Policy Committee to bring prices down immediately while the Department of Labor and its counsel of defense held to the view that high prices were permanent.

(5) Confused thinking and varied counsel in regard to ways of attaining maximum employment.

ONE BASIC DIFFERENCE between 1944 and 1918 fails to emerge in this book. It is that 1944–45 may mark not the end of the war, but concentration on the Pacific phase. The interval between victory in Europe and victory in the Pacific could mean a more thoroughly planned reconversion process than that of 1918–19.

The blueprint for reconversion that Howenstine recommends is definitely along right lines, but in some respects inadequate. He urges a strong central directive agency of the Federal Government to integrate the policies of all Government agencies, and a set of items that are now fairly standard—a speedy demobilization program based on military and not domestic economic considerations, the maintenance of wartime taxes during the first postwar year and later modifications depending on the volume of consumers' spending and price changes, use of surplus commodities to balance effective demand and the available goods, several ways of disposing of Government-owned plants including sale or lease to new private management, a reorganized and extended Social Security program, full participation in foreign relief, reconstruction, and investment, and brief retention of some price controls.

The relative importance of these items is not indicated. I am inclined to think that the first, a coordinating agency, is the most important and that the last, which implies assuring ourselves against either inflation or deflation after the war, is the second; and that this blueprint deals inadequately with prices of farm products and of raw materials, the most flexible and therefore most dangerous part of the reconversion economy.

Howenstine fears a certain amount of post-war unemployment "more than temporary in nature," and I doubt that his blueprint is adequate to meet it. He too readily accepts a pre-war notion that a flexible compensatory Government-spending program in Public Works has a vital role to play here. The 6-year program of public works of the late Public Works Reserve and The National Resources Planning Board is now recognized as neither large enough nor flexible enough to meet this need. All the information available now shows that public spending in the form of public works is too sluggish a program to play a strategic role in demobilization, if demobilization takes place rapidly in 1945–46 as is generally expected.

—Louis H. Bean

CHANNELING RESEARCH INTO EDUCATION. Prepared for the Committee on Southern Regional Studies and Education. By *JOHN E. IVEY, Jr.* American Council on Education. Washington, D. C. 187 pages.

THIS MODEST VOLUME records the beginnings of a movement of very great significance to all who are concerned either with research or with education—a movement which has the dual purpose, on the one hand, of obtaining the translation of research findings into readily understandable everyday language and, on the other, of facilitating their absorption into the educational process.

For many years the southern United States have been recognized as a region which, measured by objective standards of social and economic progress, stands near the bottom of the national scale. Yet its natural and human resources are ample to support a high level of living. Research materials on southern resources and the ways in which they may be utilized for the improvement of living are plentiful, but almost nothing has been done toward interpreting this knowledge in terms of its significance for everyday life and channeling it to the people.

Such considerations as these led the American Council on Education in April 1943 to appoint a Committee on Southern Regional Studies and Education, whose membership includes both research leaders and school leaders, to search for ways and means of tapping reservoirs of research studies for significant instructional materials. Though this particular study relates to the Southern States, the problem with which it deals is national, not regional, in scope: it is how the total educational process may be used to bring about man's wholesome relationship to his environment and his sane and skillful use of resources for permanent social well-being. This educational emphasis inevitably will require the continuous flow of research findings into community knowledge, in order that they may provide the motivation and the factual basis for informed action.

The Committee, under Homer P. Rainey, Chairman, planned its attack upon the problem in three phases: first, an exploration of problems and resources; second, a work-conference of educators and research specialists; and, finally, further research along lines indicated by the conference, and the publication of a summary giving the findings of the entire 7-months' study.

Channeling Research into Education is the Committee's report. It is not in the usual sense the work of an individual, but rather, the product of group effort. Its form and substance are derived from innumerable conferences with representatives of research and educational agencies and from proceedings of the 1943 Gatlinburg Work-Conference as well as from the criticisms and suggestions of the Committee members. Thus it is in itself an example of the educational process which the Committee seeks to stimulate and strengthen. It represents the cooperation of research leaders and educational leaders in the study of the problem; and participation in planning by the workers who will be responsible for carrying out the plans. The way the study was made, the author observes, the group experience involved is perhaps more important than the monograph which resulted.

The study first considers the broad problem of resource education for the South, concluding that "if southern education is to take more than an academic interest in regional development, it must take vigorous steps to prepare an educational program which will combine resource study with the process of equipping students to participate more effectively in community, regional, and national life. A traditional educational approach cloaked over resource study will not produce a resource education that can make a maximum contribution to regional development . . .

"One fact stands out: to use effectively the results of regional research, embodied in new educational materials, southern education must search for a new orientation. The resources and problems of the region are the starting points. The needs of the people clearly indicate the direction."

The major portion of the report, Part II, surveys the problems involved in the translation of research facts into form and content adapted to educational needs, and it should be noted particularly that the term "research translation" is used here to include distribution and use, not production alone. There are chapters on educational materials now available for southern resource education; pioneer efforts in research translation in Arkansas, Kentucky, Virginia, Georgia, and the Tennessee Valley region; and on the different requirements to obtain effective translation for school and for nonschool agencies. A generous bibliography of selected source materials is appended.

It is obvious to the attentive reader that *Channeling Research into Education* more nearly marks the beginning than the end of the Committee's undertaking, that its work is still preliminary. In the late summer of 1944, since publication of its report, the Committee sponsored a second work-conference at Gatlinburg, when representatives of regional and State agencies of research and education spent a week in discussions and group work on plans for a number of special projects in research translation and resource education. Research workers and educational workers alike look forward to the Committee's continuing leadership in bringing about the translation of research findings into useful materials for southern resource education.

—*Mary U. Rothrock*

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An enterprise, when fairly once begun
Should not be left till all that ought is won.

—Shakespeare

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THE FOOD FRONT IN WORLD WAR I. By *MAXCY ROBSON DICKSON*. American Council on Public Affairs. Washington, D. C. 194 pages. Bibliography.

"WILL YOU have it said that little Karl in Germany, or little Marie in France, or little Lucia in Italy has a braver heart than you?

"The Little German boy or girl when told he can have no bread says 'It is for Germany.' . . .

"You American boys and girls can say more than 'It is for America.'

"'It is for freedom, it is for liberty, it is for the whole world. We will gladly give up anything you ask. Our hearts are as brave as French hearts. They are as brave as English hearts, as brave as German hearts, as brave as Belgian hearts, as brave as Italian hearts."

The Food Front in World War I is a colorful account of the Food Administration's intensive propaganda and educational campaign designed to reach everyone including small children, as is shown by the above illustration taken from the book. This quotation also brings out the difference of emphasis in the food educational programs used during the two World Wars. The present emphasis is on good nutrition; in World War I stress was placed on self-sacrifice and on food conservation.

The special nutrition edition of the *Consumers' Guide* with its slogan, "Make America Strong by Making Americans Stronger" typified the new emphasis. This change in emphasis was in turn related to marked differences in the food supply as well as to the more advanced knowledge of nutrition and to the more extensive economic controls used during the present war.

Dr. Dickson has made a contribution in his lively description of the propaganda techniques of the Food Administration as illustrated by such chapter headings as "Appeal to Babel," and "Dangerous Curves." The book would have been more helpful to students of administration, however, if the author had definitely limited his discussion to propaganda techniques. The introductory and concluding chapters deal more broadly with over-all activities of the Food Administration; this broader treatment seems indeed to be an afterthought.

Failure at times to distinguish clearly between the propaganda campaign and the regulatory activities of the Food Administration tends to give the reader a misleading evaluation of its total program. In relation to this point it is not conclusive, until one reaches the bibliographical section, that the study here reported is based almost entirely upon material in the National Archives. A broader study would require a check of the material in the Hoover Library on War, Revolution, and Peace; the Hearings on the Emergency Price Control Act of 1942 which included Herbert Hoover's testimony on food administration; Ed. Lasater's charges after resigning as Chief of the Department of Livestock and Animal Food Products of the Food Administration, and other sources.

This description of techniques used for securing Nation-wide participation in the food programs of the last war emergency is timely and interesting reading. It represents useful information on the propaganda front of World War I.

—*Gladys Baker*

THE WAR AND AMERICAN AGRICULTURE. By *JOHN D. BLACK* and *CHARLES A. GIBBONS*. (Review of Economic Statistics, v. 26, No. 1, February 1944. Harvard University Press. Cambridge, Mass. 55 pages.)

THIS STUDY which is in part a continuation of the senior author's *Parity, Parity, Parity,* published in 1942, is both a graphic summary and a thoughtful discussion of the economic developments during the war as they affect agriculture and labor. Perhaps the title "The Relative Position of Agriculture and Labor as Influenced by the War" would have been more descriptive of a major part of the contents of this monograph than the one actually selected by the authors.

The study is developed from the three parity approaches—agriculture, labor, and capital—but the first two are more fully developed than the last. The reader will find particularly valuable the comparisons of economic progress of agriculture and labor as measured from different base periods. The merits of the 1925–29 base period over either 1935–39 or 1909–14 are clearly set forth and, in the opinion of this reviewer, are deserving of further consideration. The value of these comparisons is heightened by the use of data giving a perspective over a long historical period.

The statement that "Since January 1, 1942, farmers * * * in- ased their bank deposits by per- ps as much as four billion dollars" 12) appears to be an overstate- nt in the light of more recent com- tations. It seems more likely that such increase was not greatly in excess of 2.5 billions. No mention is made of farmers' savings in form of currency. Although difficult of measurement, their importance in the aggregate of farmer savings is such that the picture is incomplete with their omission.

DESCRIPTIVE sections are followed by sections dealing with control measures, the price outlook, and production outlook. The first of these is a summary of the various measures adopted in the price-control program. It affords the reader a concise review and appraisal of these important wartime measures.

Two concluding sections, dealing with the post-war price and production prospects, appear more optimistic than current information on impending problems of reconversion would indicate as justifiable. Perhaps the closeness of these impending events—bringing an awareness of the grave problems involved in post-war national and international policies—engenders more caution than would have been present when the authors completed their study.

As an over-all appraisal, one must conclude that this study is a valuable addition to the history and interpretation of wartime economic developments.

—*Norman J. Wall*

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The task of planning the great design of security and peace has been well begun. It now remains for the Nations to complete the structure in a spirit of constructive purpose and mutual confidence.

—Franklin D. Roosevelt